```
     FILE 'HCAPLUS' ENTERED AT 14:43:55 ON 30 JAN 2009
L1        32931 S OLIGOSACCHARIDE
L2       114856 S MANNO OR MANNOSE OR ISOMALTO OR ISOMALTOSE OR GENTIO OR GENTI
L3         6385 S L1 AND L2
L4        76010 S CASEINOGLYCOMACROPEPTIDE OR GUAR OR GALACTOMANNAN OR LACTOSE
L5        81984 S L3 OR L4
L6       172759 S PREBIOTIC OR ENTERIC OR GUT OR INTESTINAL
L7         3858 S L5 AND L6
L8         2624 S L7 AND (PY<2003 OR AY<2003 OR PRY<2003)
L9           40 S L8 AND PREBIOTIC
L10         257 S CASEINOGLYCOMACROPEPTIDE OR GLYCOMACROPEPTIDE
L11          16 S CASEINOGLYCOMACROPEPTIDE
L12          14 S L11 AND (PY<2003 OR AY<2003 OR PRY<2003)
L13         944 S CHITOOLIGOSACCHARIDE OR (CHITO-OLIGOSACCHARIDE) OR CHITOTRIOS
L14         953 S CHITOOLIGOSACCHARIDE OR (CHITO-OLIGOSACCHARIDE) OR CHITOTRIOS
L15        4563 S PREBIOTIC
L16           0 S L14 AND L15
L17      166445 S GUT OR MICROFLORA OR INTESTINAL
L18          15 S L14 AND L17
L19           7 S L18 AND (PY<2003 OR AY<2003 OR PRY<2003)
L20           1 S METHYL(W)(MANNOOLIGOSACCHARIDE OR (MANNO-OLIGOSACCHARIDE))
L21        1418 S GENTIOOLIGOSACHCARIDE OR GENTIOBIOSE OR GENTIOTRIOSE OR GENTI
L22        1434 S GENTIOOLIGOSACCHARIDE OR GENTIOBIOSE OR GENTIOTRIOSE OR GENTI
L23          28 S L17 AND L22
L24          19 S L23 AND (PY<2003 OR AY<2003 OR PRY<2003)
L25         206 S METHYL MANNO?
L26           2 S L17 AND L25
L27           0 S METHYL(W)(MANNOBIOSE OR MANNOTRIOSE OR MANNOTETRAOSE OR MANNO
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=> file hcaplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.22       0.22

FILE 'HCAPLUS' ENTERED AT 14:43:55 ON 30 JAN 2009
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FILE COVERS 1907 - 30 Jan 2009  VOL 150 ISS 6
FILE LAST UPDATED: 29 Jan 2009  (20090129/ED)

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s oligosaccharide
L1       32931 OLIGOSACCHARIDE

=> s manno or mannose or isomalto or isomaltose or gentio or gentiobiose or arabino
or arabinose or chito or chitin or chitosan
          2762 MANNO
         43940 MANNOSE
           222 ISOMALTO
          2385 ISOMALTOSE
            62 GENTIO
          1409 GENTIOBIOSE
          4117 ARABINO
         22762 ARABINOSE
           374 CHITO
         18793 CHITIN
         35287 CHITOSAN
L2      114856 MANNO OR MANNOSE OR ISOMALTO OR ISOMALTOSE OR GENTIO OR GENTIOBI
               OSE OR ARABINO OR ARABINOSE OR CHITO OR CHITIN OR CHITOSAN

=> s l1 and l2
L3        6385 L1 AND L2

=> s caesinoglycomacropeptide or guar or galactomannan or lactose or lactulose
             0 CAESINOGLYCOMACROPEPTIDE
         12356 GUAR
          3301 GALACTOMANNAN
         60642 LACTOSE
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          2317 LACTULOSE
L4       76010 CAESINOGLYCOMACROPEPTIDE OR GUAR OR GALACTOMANNAN OR LACTOSE OR
                LACTULOSE

=> s l3 or l4
L5       81984 L3 OR L4

=> s prebiotic or enteric or gut or intestinal
          4563 PREBIOTIC
         16633 ENTERIC
         32607 GUT
        133137 INTESTINAL
L6      172759 PREBIOTIC OR ENTERIC OR GUT OR INTESTINAL

=> s l5 and l6
L7        3858 L5 AND L6

=> s l7 ad (PY<2003 or AY<2003 or PRY<2003)
MISSING OPERATOR L7 AD
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l7 and (PY<2003 or AY<2003 or PRY<2003)
      22983114 PY<2003
       4503368 AY<2003
       3972163 PRY<2003
L8        2624 L7 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> s l8 and prebiotic
          4563 PREBIOTIC
L9          40 L8 AND PREBIOTIC

=> d l9 1-40 ti abs bib

L9   ANSWER 1 OF 40  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Prebiotic oligosaccharide powder containing macroelements
AB   The subject of the invention is an oligosaccharide power containing biol.
     active macroelements (calcium, and, optionally, magnesium), especially as a
     prebiotic powder.  An edible organic acid is stirred into as aqueous
     solution of a prebiotic oligosaccharide. The acid
     stoichiometrically corresponds to the combined amount of the desired calcium
     and magnesium content.  Then, a calcium compound, ideally calcium carbonate,
     is added, in an amount corresponding stoichiometrically to 5% by weight of the
     oligosaccharide and, optionally and inorg. magnesium compound is added,
     preferably magnesium hydroxy carbonate.  After the reaction has taken
     place, the resulting solution is stirred constantly and dried using a known
     vaporization methods.  As a prebiotic, lactulose,
     fructooligosaccharide or lactosaccharose is used, and as an organic acid,
     ideally citric acid, lactic acid and/or malic acid is used.
AN   2007:342494  HCAPLUS <<LOGINID::20090130>>
DN   147:197231
TI   Prebiotic oligosaccharide powder containing macroelements
IN   Schaeffer, Bela; Szakaly, Sandor; Feher, Jozsef; Keller, Beata
PA   Magyar Tejgazdasagi Kiserleti Intezet Kft., Hung.
SO   Hung. Pat. Appl., 11pp.
     CODEN: HUXXCV
DT   Patent
LA   Hungarian
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
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PI   HU 9702353          A2    19990928    HU 1997-2353          19971204 <--
     HU 9702353          A3    19991228
     HU 225544           B1    20070328
PRAI HU 1997-2353              19971204  <--

L9   ANSWER 2 OF 40  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Prebiotic compositions containing oligosaccharides for control
     of intestinal disorders such as inflammatory bowel disease,
     diarrhea and constipation.
AB   The present invention concerns nutritional comps. comprising
     oligosaccharides for controlling inflammatory bowel disease and related
     disorders, such as diarrhea and constipation.
AN   2004:513455  HCAPLUS <<LOGINID::20090130>>
DN   141:53289
TI   Prebiotic compositions containing oligosaccharides for control
     of intestinal disorders such as inflammatory bowel disease,
     diarrhea and constipation.
IN   Gibson, Glenn R.; Beer, Michael
PA   Novartis Nutrition Ag, Switz.
SO   PCT Int. Appl., 29 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.       DATE
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PI   WO 2004052121       A1     20040624    WO 2003-EP14087       20031211 <--
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
             GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT,
             LU, LV, MA, MD, MK, MN, MX, NI, NO, NZ, OM, PG, PH, PL, PT, RO,
             RU, SC, SE, SG, SK, SY, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN,
             YU, ZA, ZW
         RW: AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE,
             DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
             SI, SK, TR
     US 20040131659       A1     20040708    US 2003-721652        20031125 <--
     CA 2508693           A1     20040624    CA 2003-2508693       20031211 <--
     AU 2003294835        A1     20040630    AU 2003-294835        20031211 <--
     EP 1571923           A1     20050914    EP 2003-785796        20031211 <--
          R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     BR 2003017272        A      20051108    BR 2003-17272         20031211 <--
     CN 1731938           A      20060208    CN 2003-80105558      20031211 <--
     JP 2006509797        T      20060323    JP 2004-558076        20031211 <--
     NZ 540576            A      20070330    NZ 2003-540576        20031211 <--
     ZA 2005004385        A      20060726    ZA 2005-4385          20050530 <--
     MX 2005006266        A      20050819    MX 2005-6266          20050610 <--
PRAI GB 2002-29015        A      20021212  <--
     WO 2003-EP14087      W      20031211
RE.CNT  1      THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9   ANSWER 3 OF 40  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Use of prebiotics for the prevention of onset of Type II diabetes
AB   The invention discloses the use of prebiotics for the preparation of food or
     pharmaceutical compns. intended for the prevention of the appearance of
     type II diabetes in subjects presenting a predisposition to develop this
     type of diabetes, as well as the food and pharmaceutical compns. containing
     these prebiotics.
AN   2004:218529  HCAPLUS <<LOGINID::20090130>>
```

DN 140:264511
TI Use of prebiotics for the prevention of onset of Type II diabetes
IN Monsan, Pierre; Valet, Philippe; Remaud, Simeon Magali; Saulnier, Blache Jean Sebastien
PA Institut National de la Recherche Agronomique INRA, Fr.
SO Fr. Demande, 22 pp.
CODEN: FRXXBL
DT Patent
LA French
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI FR 2844453	A1	20040319	FR 2002-11389	20020913 <--
FR 2844453	B1	20060519		
WO 2004024167	A2	20040325	WO 2003-FR2705	20030912 <--
WO 2004024167	A3	20040513		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003282156	A1	20040430	AU 2003-282156	20030912 <--
EP 1539195	A2	20050615	EP 2003-773775	20030912 <--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

ZA 2005002976	A	20060628	ZA 2005-2976	20050413 <--
US 20060100172	A1	20060511	US 2005-527819	20051011 <--
PRAI FR 2002-11389	A	20020913	<--	
WO 2003-FR2705	W	20030912		

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Medicament, food supplement, and fodder additive containing plant-origin antioxidants and prebiotics.
AB The invention relates to a medicament, food supplement, or fodder additive containing prebiotics and plant-based antioxidants, especially oligosaccharides and grapeseed and herb exts.
AN 2004:182715 HCAPLUS <<LOGINID::20090130>>
DN 140:198447
TI Medicament, food supplement, and fodder additive containing plant-origin antioxidants and prebiotics.
IN Berkulin, Wilhelm; Pischel, Ivo
PA Finzelberg G.m.b.H. & Co. K.-G., Germany
SO PCT Int. Appl., 8 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004017979	A2	20040304	WO 2003-EP9068	20030815 <--
WO 2004017979	A3	20040422		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,

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            GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
            LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
            PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
            TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
            KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
            FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
            BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
    AU 2003266285      A1    20040311    AU 2003-266285        20030815 <--
    EP 1530479         A2    20050518    EP 2003-792330        20030815 <--
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
           IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
PRAI EP 2002-18416      A     20020816  <--
    WO 2003-EP9068      W     20030815
RE.CNT  6     THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9   ANSWER 5 OF 40  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Use of hydrocolloids as prebiotic food additives for decreasing
     flatulence
AB   The use of a hydrocolloid as a prebiotic in the preparation of a
     product for consumption is described.  The hydrocolloid has the advantage
     of reduced gas release when fermented by bacteria in the gastrointestinal
     tract after the consumption of said product.  Food compns. containing the
     hydrocolloid and methods for using the compns. in methods of treatment are
     also provided.
AN   2004:20410  HCAPLUS <<LOGINID::20090130>>
DN   140:76302
TI   Use of hydrocolloids as prebiotic food additives for decreasing
     flatulence
IN   Rautonen, Nina; Apajalahti, Juha; Siikanen, Osmo
PA   Danisco A/S, Den.
SO   PCT Int. Appl., 48 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   WO 2004002240       A2     20040108    WO 2003-IB3282         20030620 <--
     WO 2004002240       A3     20040325
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
            CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
            GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
            LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
            PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,
            TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
            KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
            FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
            BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU 2003247112       A1     20040119    AU 2003-247112         20030620 <--
PRAI GB 2002-14800       A      20020626  <--
     GB 2002-20238       A      20020830  <--
     US 2002-417401P     P      20021009  <--
     WO 2003-IB3282      W      20030620
RE.CNT  2     THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9   ANSWER 6 OF 40  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   The use of dead-end and cross-flow nanofiltration to purify
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prebiotic oligosaccharides from reaction mixtures
AB Nanofiltration (NF) of model sugar solns. and com. oligosaccharide mixts. were studied in both dead-end and cross-flow modes. Preliminary trials, with a dead-end filtration cell, demonstrated the feasibility of fractionating monosaccharides from disaccharides and oligosaccharides in mixts., using loose nanofiltration (NF-CA-50, NF-TFC-50) membranes. During the nanofiltration purification of a com. oligosaccharide mixture, yields of 19% for the monosaccharides and 88% for di, and oligosaccharides were obtained for the NF-TFC-50 membrane after four filtration steps, indicating that removal of the monosaccharides is possible, with only minor losses of the oligosaccharide content of the mixture The effects of pressure, feed concentration, and filtration temperature were studied in similar expts. carried out in a cross-flow system, in full recycle mode of operation. The rejection rates of the sugar components increased with increasing pressure, and decreased with both increasing total sugar concentration in the feed and increasing temperature Continuous diafiltration (CD) purification of model sugar solns. and com. oligosaccharide mixts. using NF-CA-50 (at 25°C) and DS-5-DL (at 60°) membranes, gave yield values of 14 to 18% for the monosaccharide, 59 to 89% for the disaccharide and 81 to 98% for the trisaccharide present in the feed. The study clearly demonstrates the potential of cross flow nanofiltration in the purification of oligosaccharide mixts. from the contaminant monosaccharides.
AN 2003:878653 HCAPLUS <<LOGINID::20090130>>
DN 141:107866
TI The use of dead-end and cross-flow nanofiltration to purify prebiotic oligosaccharides from reaction mixtures
AU Grandison, Alistair S.; Goulas, Athanasios K.; Rastall, Robert A.
CS School of Food Biosciences, The University of Reading, Reading, RG6 6AP, UK
SO Songklanakarin Journal of Science and Technology (2002), 24(Suppl.), 915-928
CODEN: SJSTA2
PB Songklanakarin Journal of Science and Technology
DT Journal
LA English
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Micronutrient combination product with pro- and prebiotics.
AB A probiotics-containing micronutrient combination product comprises at least two product portions with various composition, whereby the first portion has probiotics as active ingredients and the second portion has a prebiotic with trace elements, vitamins and secondary plant materials.
AN 2003:696036 HCAPLUS <<LOGINID::20090130>>
DN 139:229690
TI Micronutrient combination product with pro- and prebiotics.
IN Glagau, Kristian; Schmidt, Michael
PA Orthomol Pharmazeutische Vertriebs GmbH, Germany
SO Ger. Offen., 8 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 10206995	A1	20030904	DE 2002-10206995	20020219 <--
PRAI DE 2002-10206995		20020219 <--		

L9 ANSWER 8 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Pet food containing colostrum, a probiotic, and a prebiotic
AB A feed composition with health benefits, particularly for the development of the gastrointestinal tract during weaning in puppies or kittens, comprises colostrum, a probiotic, and a prebiotic. Thus, a dairy treat may include 43% sucrose, 30% hydrogenated vegetable fat, 15% colostrum, 5% yogurt powder, 3% prebiotic, 2% probiotic, and other ingredients. Lactobacillus acidophilus may be used as the probiotic.
AN 2003:396643 HCAPLUS <<LOGINID::20090130>>
DN 138:400863
TI Pet food containing colostrum, a probiotic, and a prebiotic
IN Giffard, Catriona Julie; Kendall, Peter
PA Mars Incorporated, USA
SO PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2003041512	A1	20030522	WO 2002-GB5053	20021108	<--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
	AU 2002339112	A1	20030526	AU 2002-339112	20021108	<--
	AU 2002339112	B2	20071011			
	GB 2382528	A	20030604	GB 2002-26137	20021108	<--
	GB 2382528	B	20040505			
	EP 1446023	A1	20040818	EP 2002-777492	20021108	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK					
	JP 2005508647	T	20050407	JP 2003-543412	20021108	<--
	US 20050079244	A1	20050414	US 2004-495289	20041123	<--
	AU 2008200052	A1	20080131	AU 2008-200052	20080107	<--
	US 20080260893	A1	20081023	US 2008-34190	20080409	<--
PRAI	GB 2001-27152	A	20011112	<--		
	GB 2001-27528	A	20011116	<--		
	AU 2002-339112	A3	20021108	<--		
	WO 2002-GB5053	W	20021108	<--		
	US 2004-495289	B1	20041123			

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 9 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Application of Pre-Probiotics in Health: The Lactulose Example.
[In: Eur. J. Nutr., 2002; 41(Suppl. 1)]
AB Unavailable
AN 2003:123982 HCAPLUS <<LOGINID::20090130>>
DN 138:220796
TI Application of Pre-Probiotics in Health: The Lactulose Example.
[In: Eur. J. Nutr., 2002; 41(Suppl. 1)]
AU Vonk, Roel J.; Priebe, Marion G.; Editors
CS Germany

SO (2002) Publisher: (Steinkopff Verlag, Darmstadt, Germany), 37 pp.
DT Book
LA English

L9 ANSWER 10 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Effects of lactulose on the intestinal microflora of periparturient sows and their piglets
AB The periparturient period of animals (and humans) is very stressful and influenced by the microecosystem of the gastrointestinal tract (GIT). Performance and productivity of animal husbandry depend on the health of animal mothers and their offspring. We investigated the influence of prebiotic amts. of lactulose in sows and their piglets. Two exptl. trial sows received daily 30 mL lactulose, 71 field trial sows received daily 45 mL lactulose during their periparturient period (10 days before until 10 days after parturition). The weaners of trial sows received 15 mL lactulose per 1 kg baby food 10 days before and 10 days after weaning. The effect of lactulose was recorded by performance parameters like number of piglet born alive, losses until weaning, body mass of piglets, daily weight gain of weaners until 35 days after weaning. The effect of lactulose on GIT microflora was estimated by bacterial counts of faeces of sows (total aerobic bacteria, Gram-neg. bacteria, Clostridium (C.) perfringens). In order to show a previously unknown effect of lactulose we investigated the levels of antibodies to phospholipase C (PLC) of C. perfringens in plasma of exptl. sows and in colostral and ripe milk of field sows. Lactulose influenced the performance parameters of sows in a non-significant way. In case of weaners we recorded significant daily weight gains. Lactulose significantly influenced total aerobic bacterial counts, C. perfringens counts in faeces of sows 20 days after parturition. Under exptl. conditions it was shown that trial sows and their piglets had higher IgG-antibody levels to C. perfringens PLCs than the control animals. Similar results were found under field conditions. Trial sows had significant higher IgG-anti LPS (J5) antibodies in milk 10 days after birth.
AN 2003:101269 HCAPLUS <<LOGINID::20090130>>
DN 138:286675
TI Effects of lactulose on the intestinal microflora of periparturient sows and their piglets
AU Krueger, M.; Schroedl, W.; Isik, K.; Lange, W.; Hagemann, L.
CS Institute for Bacteriology and Mycology, Veterinary Faculty, University of Leipzig, Leipzig, 04103, Germany
SO European Journal of Nutrition (2002), 41(Suppl. 1), 1/26-1/31
CODEN: EJNUFZ; ISSN: 1436-6207
PB Steinkopff Verlag
DT Journal
LA English
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 11 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Medical, nutritional and technological properties of lactulose. An update
AB A review. The undigestible disaccharide lactulose has been in medical use for over 40 yr, mainly in the treatment of portosystemic encephalopathy and of constipation. Pharmacodynamics of lactulose make it an efficacious and safe drug in these indications. But the reason for its numerous potential benefits are under research now. The major principle of action is the promotion of growth and activity of lactic acid bacteria in the gut which counteract detrimental species such as

clostridia or salmonellae. This shows that prebiotic action, if used accordingly, can have medically significant effects. The mechanism of action, medical and prebiotic effects, veterinary uses, and technol. properties of lactulose, e.g. in yogurt production are reviewed.

AN 2003:101268 HCAPLUS <<LOGINID::20090130>>
DN 138:286580
TI Medical, nutritional and technological properties of lactulose. An update
AU Schumann, Christian
CS Solvay Pharmaceuticals GmbH, Hannover, 30002, Germany
SO European Journal of Nutrition (2002), 41(Suppl. 1), I/17-I/25
CODEN: EJNUFZ; ISSN: 1436-6207
PB Steinkopff Verlag
DT Journal; General Review
LA English
RE.CNT 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 12 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Prebiotic and probiotic compositions and methods for their use in gut-based therapies
AB Microencapsulated and/or enteric coated composition containing a mixture of probiotics, prebiotics and ammoniaphilic bacteria with high urease activity with or without sorbents with specific adsorption affinities for uremic toxins such as creatinine, uric acid, phenol, indoles, middle mol. weight mols. and inorg. phosphate and water absorbents are provided. Also provided are methods of allievating symptoms of uremia in a patient which comprises administering orally to a patient suffering from uremia a microencapsulated and/or enteric-coated composition
AN 2002:888446 HCAPLUS <<LOGINID::20090130>>
DN 137:375219
TI Prebiotic and probiotic compositions and methods for their use in gut-based therapies
IN Ranganathan, Natarajan; Dickstein, Jack; Mehta, Raj
PA Kibow Biotech, Inc, USA
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002091833	A1	20021121	WO 2002-US15073	20020510 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 20020187134	A1	20021212	US 2001-855346	20010515 <--
US 6706287	B2	20040316		
CA 2447376	A1	20021121	CA 2002-2447376	20020510 <--
AU 2002342641	A1	20021125	AU 2002-342641	20020510 <--
AU 2002342641	B2	20070426		
EP 1397044	A1	20040317	EP 2002-769723	20020510 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

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     CN 1509144          A     20040630    CN 2002-810078         20020510 <--
     CN 100337549        C     20070919
     JP 2004533442       T     20041104    JP 2002-588760         20020510 <--
     IN 2003MN01029      A     20050624    IN 2003-MN1029         20031107 <--
PRAI US 2001-855346      A     20010515  <--
     WO 2002-US15073     W     20020510  <--
RE.CNT  7     THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9   ANSWER 13 OF 40  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Diminished Efficacy of Colonic Adaptation to Lactulose Occurs in
     Patients with Inflammatory Bowel Disease in Remission
AB   Lactulose was proposed to be beneficial in treating inflammatory
     bowel disease (IBD).  The hypothesis is based on the prebiotic
     potential of lactulose.  A practical approach to testing its
     usefulness is to determine colonic adaptation to tolerable doses in patients
     with IBD.  Our objective was to determine if a 3-wk course of lactulose
     will decrease BH2 and symptoms in response to an acute lactulose
     challenge test in control subjects and IBD patients.  The design was a
     Prospective cohort study.  Subjects were given a 30-g lactulose
     challenge test (test 1), and then ingested 10 g of lactulose
     twice a day for 3 wk before being retested (Test 2).  A third test was
     given after a further 5-wk washout period.  The main outcomes were the
     change in 4-h sum of BH2(Σ4HrBH2) values obtained every 30 min, peak
     BH2, and 4-h sum of symptom score (Σ4HrSS) during the
     lactulose challenge test.  In addition, the authors also report the
     change in self-reported symptoms and diarrhea during the 3-wk
     administration of lactulose.  In controls, Σ4HrBH2
     decreased from test 1 (380.5 ± 56.6 ppm) to test 2 (288.6 ± 57.4
     ppm) (P < 0.05), and returned toward test 1 levels by test 3 (307.5 ±
     53.1, P > 0.5).  Unlike controls, the Σ4HrBH2 in patients failed to
     achieve significance between test 1 (444.5 ± 55.8 ppm), test 2 (366.5
     ± 80.7 ppm, P > 0.2) or test 3 (411.6 ± 62.5 ppm, P > 0.2).
     Σ4HrSS results in controls followed a pattern similar to
     Σ4HrBH2, achieving significance only in test 2 (P < 0.02).  Symptoms
     during the intertest periods decreased by the third week in controls (P <
     0.05), but not in patients (P > 0.5).  Symptoms were lower in patients and
     varied insignificantly both in challenges and intertest periods.  In
     conclusion, although controls adapt to a 3-wk period of lactulose
     ingestion, IBD patients fail to meet the criteria for adaptation.
     However, longer studies may be needed to establish whether IBD patients
     are slower to adapt.
AN   2002:862630  HCAPLUS <<LOGINID::20090130>>
DN   138:248271
TI   Diminished Efficacy of Colonic Adaptation to Lactulose Occurs in
     Patients with Inflammatory Bowel Disease in Remission
AU   Szilagyi, Andrew; Rivard, Julie; Shrier, Ian
CS   Division of Gastroenterology, Department of Medicine, Sir Mortimer B.
     Davis Jewish General Hospital, Montreal, QC, Can.
SO   Digestive Diseases and Sciences (2002), 47(12), 2811-2822
     CODEN: DDSCDJ; ISSN: 0163-2116
PB   Kluwer Academic/Plenum Publishers
DT   Journal
LA   English
RE.CNT  44    THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9   ANSWER 14 OF 40  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Prebiotics in infant formulas: biochemical characterisation by thin layer
     chromatography and high performance anion exchange chromatography
AB   Background.  Breast-fed infants, unlike bottle-fed babies, have a microbic
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intestinal flora characterized by a marked predominance of bifidobacteria and lactic acid bacteria. This is essentially due to the prebiotic effect of oligosaccharides in human milk. Recently, oligosaccharides with a prebiotic effect have been added to formulas. Aim. To characterize the mixture of oligosaccharides contained in these new formulas. Materials and Methods. The characterization of oligosaccharides was performed using thin layer chromatog. as well as high performance anion exchange chromatog. Results. The mixture of oligosaccharides used in the formulas analyzed was made up of oligosaccharides with low mol. weight (transgalactosylated oligosaccharides) and polysaccharides with high mol. weight (inulin). Conclusion. With the methods employed, it was possible to characterize the mixture of oligosaccharides used as prebiotics in the formulas now available on the market.

AN 2002:856075 HCAPLUS <<LOGINID::20090130>>
DN 138:72203
TI Prebiotics in infant formulas: biochemical characterisation by thin layer chromatography and high performance anion exchange chromatography
AU Coppa, G. V.; Bruni, S.; Zampini, L.; Galeazzi, T.; Gabrielli, O.
CS Institute of Paediatrics, University of Ancona, Ancona, Italy
SO Digestive and Liver Disease (2002), 34(Suppl. 2), S124-S128
CODEN: DLDIFK; ISSN: 1590-8658
PB W. B. Saunders
DT Journal
LA English
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 15 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Growth, viability and activity of Bifidobacterium spp. in skim milk containing prebiotics
AB Growth, activity and mean doubling time (Td) of five Bifidobacterium species in the presence of four types of prebiotics, and concns. of acetic and lactic acids were determined during fermentation and after 4 wk of refrigerated storage. The Td was lowest for B. animalis with raftilose and inulin. Retention of viability of bifidobacteria was greatest with hi-amylose corn starch (hi-maize). The average pH of skim milk at the end of 4 wks storage averaged 4.34 (for B. animalis with raftilose) to 4.07 (for B. longum with inulin). The highest levels of acetic acid and lactic acid were produced by B. pseudolongum with lactulose and B. infantis with lactulose, resp.
AN 2002:805574 HCAPLUS <<LOGINID::20090130>>
DN 138:23935
TI Growth, viability and activity of Bifidobacterium spp. in skim milk containing prebiotics
AU Bruno, F. A.; Lankaputhra, W. E. V.; Shah, N. P.
CS School of Life Sciences and Technology, Melbourne City Mail Centre, Victoria University, Victoria, 8001, Australia
SO Journal of Food Science (2002), 67(7), 2740-2744
CODEN: JFDSAZ; ISSN: 0022-1147
PB Institute of Food Technologists
DT Journal
LA English
RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 16 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Review article: lactose - a potential prebiotic
AB A review. Lactose maldigestion, which affects a large majority of the world's population, was mostly linked with uncomfortable symptoms.

In addition, dairy consumption is variably blamed or recommended for a number of ill effects. There is, however, emerging evidence that certain lactic acid-producing bacteria, which selectively consume prebiotics, may be beneficial against some lower intestinal diseases. Lactose maldigestion and lactose should perhaps be re-evaluated as a potential provider of such a prebiotic. This historical and observational review discusses lactose and argues the opinion that it has prebiotic potential. Moreover, in maldigesters, natural ingestion or lack thereof may be relevant in the pathogenesis of diseases such as colorectal cancer and inflammatory bowel diseases.

AN 2002:783937 HCAPLUS <<LOGINID::20090130>>
DN 138:72384
TI Review article: lactose - a potential prebiotic
AU Szilagyi, A.
CS School of Medicine, Division of Gastroenterology, Department of Medicine, The Sir Mortimer B. Davis Jewish General Hospital, McGill University, Montreal, QC, Can.
SO Alimentary Pharmacology and Therapeutics (2002), 16(9), 1591-1602
CODEN: APTHEN; ISSN: 0269-2813
PB Blackwell Science Ltd.
DT Journal; General Review
LA English
RE.CNT 145 THERE ARE 145 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 17 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Prebiotic oligosaccharides: evaluation of biological activities and potential future developments
AB A review. Prebiotics are recognized for their ability to increase levels of 'health promoting' bacteria in the intestinal tract of humans or animals. This normally involves targeting the activities of bifidobacteria and/or lactobacilli. Non digestible oligosaccharides such as fructo-oligosaccharides, lactulose and traps-galacto-oligosaccharides seem to be efficacious prebiotics in that they confer the degree of selective fermentation required. Other oligomers are used as prebiotics in Japan e.g. xylo-oligosaccharides, soybean-oligosaccharides, isomalto-oligosaccharides. To determine prebiotic functionality, various in vitro systems may be used. These range from simple batch culture fermenters to complex models of the gastrointestinal tract. The definitive test however is an in vivo study. The advent of mol. based procedures in gut microbiol. has alleviated many concerns over the reliability of microbial characterization, in response to prebiotic intake. Techniques such as DNA probing and mol. fingerprinting are now being applied to both laboratory and human studies. These will help to further identify prebiotics that can be added to the diet and thereby fortify 'beneficial' bacteria. Such robust technologies can also be used in structure-function assays to identify the mechanisms behind prebiotic effects. Considerable research effort is currently being expended in developing so called 'second generation' prebiotics. These are forms that have multiple biol. activity that attempts health enhancement properties beyond the genus level stimulation of bifidobacteria or lactobacilli within the gut microbflora. Examples include higher mol. weight oligomers than is conventional for prebiotics, such that targeted activities in the distal colon are feasible (the left side of the human large gut being the frequent area for colonic disorder). Glycobiol. is also developing anti-adhesive prebiotics that incorporate receptor sites for common gut pathogens and/or their activities. Through the use of reverse

enzyme technol., as applied to β-galactosidase activity in prebiotics, oligosaccharides that enhance a lactic microflora at the species, rather than genus, level are possible. This review gives an account of how second generation prebiotics may be manufactured, through a variety of biotechnol. techniques, and tested for their biol. activity. The health attributes of such mols. as well as existing prebiotics is also discussed, with reference to specific target populations. The prebiotic concept is a much more recent development in dietary intervention for enhanced gut function than is prebiotics. Not surprisingly therefore, research developments are proceeding quickly. Because oligosaccharides can be added to a wide variety of foodstuffs, new functional food developments are continuing. It is important that these are tested using reliable methodologies and that any health effects are underpinned by realistic mechanisms of effect.

AN 2002:783388 HCAPLUS <<LOGINID::20090130>>
DN 138:168911
TI Prebiotic oligosaccharides: evaluation of biological activities and potential future developments
AU Rastall, Robert A.; Gibson, Glenn R.
CS Unit of Food Microbial Sciences, School of Food Biosciences, University of Reading, Reading, RG6 6AP, UK
SO Probiotics and Prebiotics (2002), 107-148. Editor(s): Tannock, Gerald W. Publisher: Caister Academic Press, Wymondham, UK. CODEN: 69DEL7; ISBN: 0-9542464-1-1
DT Conference; General Review
LA English
RE.CNT 99 THERE ARE 99 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 18 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Mixtures of fructose and lactose as a low-calorie bulk sweetener with reduced glycemic index
AB Mixts. of fructose and lactose are useful for reducing caloric intake and glycemic index for individuals who are overweight, glucose-impaired, diabetic, or who just consume too large a fraction of their calories from "added sugars". The fructose/lactose sweetener is included in the daily diet as a one-for-one replacement for "added sugars" in various edible formulations without sacrificing quality of taste. Sucrose can be used as a replacement for all or part of the fructose in the claimed sweetener to increase sweetness or improve certain functional properties without substantially changing caloric value. The claimed mixts. of fully-caloric sugars work synergistically to reduce available calories and blood sugar concentration Specifically, fructose interferes strongly with normal small-intestinal absorption of lactose and interferes moderately with sucrose absorption, while lactose interferes with normal small-intestinal absorption of both sucrose and starch. Unabsorbed di- and oligosaccharides pass into the colon and cause increased growth of healthful bacteria, making the new sweetener useful as a prebiotic . No gastrointestinal symptoms of sugar intolerance were observed when the claimed sugar mixts. were ingested at normal dietary levels.
AN 2002:777608 HCAPLUS <<LOGINID::20090130>>
DN 137:262425
TI Mixtures of fructose and lactose as a low-calorie bulk sweetener with reduced glycemic index
IN Zehner, Lee R.; Zehner, Warren L.
PA Vivalac, Inc., USA
SO PCT Int. Appl., 34 pp. CODEN: PIXXD2
DT Patent
LA English

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FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   WO 2002078458       A1     20021010    WO 2002-US8855         20020322 <--
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
           CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,
           HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
           LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
           RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN,
           YU, ZA, ZW
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
           CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
           BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     US 20030031772       A1     20030213    US 2001-852462         20010510 <--
     CA 2442204           A1     20021010    CA 2002-2442204        20020322 <--
     AU 2002255882        A1     20021015    AU 2002-255882         20020322 <--
     AU 2002255882        B2     20070913
     EP 1383391           A1     20040128    EP 2002-725309         20020322 <--
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     CN 1499936           A      20040526    CN 2002-807523         20020322 <--
     CN 1259844           C      20060621
     JP 2004524040        T      20040812    JP 2002-576736         20020322 <--
     BR 2002008516        A      20041228    BR 2002-8516           20020322 <--
     US 20030082286       A1     20030501    US 2002-233748         20020903 <--
     US 6777397           B2     20040817
     US 20040147457       A1     20040729    US 2003-460792         20030612 <--
     MX 2003008783        A      20040730    MX 2003-8783           20030926 <--
     HK 1062874           A1     20061027    HK 2004-105752         20040804 <--
PRAI US 2001-279249P      P      20010328  <--
     US 2001-852462       A      20010510  <--
     WO 2002-US8855       W      20020322  <--
     US 2002-233748       A3     20020903  <--
RE.CNT  3     THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9   ANSWER 19 OF 40  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Oligosaccharide and dietary fiber as prebiotics
AB   A review on prebiotic effects of hardly-digestive
     oligosaccharides, e.g. fructooligosaccharide and lactulose, and
     dietary fiber.  The administration method of the prebiotics are also
     discussed.
AN   2002:733813  HCAPLUS <<LOGINID::20090130>>
DN   138:320291
TI   Oligosaccharide and dietary fiber as prebiotics
AU   Oku, Tsuneyuki; Nakamura, Sadako
CS   Department of Nursing and Nutrition, Seibold University of Nagasaki, Japan
SO   Food Style 21 (2002), 6(9), 50-53
     CODEN: FSTYFF; ISSN: 1343-9502
PB   Shokuhin Kagaku Shinbunsha
DT   Journal; General Review
LA   Japanese

L9   ANSWER 20 OF 40  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Nutritional advantages of probiotics and prebiotics
AB   A review.  The potential nutritional advantages of probiotics and
     prebiotics consist of preventive and sometimes curative effects against
     certain diseases.  The effects against diseases of the gastrointestinal
     origin are discussed.  There is evidence for pos. effects of some
     prebiotics to alleviate constipation and treat hepatic encephalopathy.
     Other interesting aspects include prevention of colon cancer,
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intestinal infections, and recurrence of inflammatory bowel diseases. Some probiotics can alleviate lactose intolerance, antibiotic-associated intestinal disorders, and gastroenteritis. Pos. trials have suggested preventive effects against intestinal colonization with specific gut pathogens, including Clostridium difficile and Helicobacter pylori.

AN 2002:484108 HCAPLUS <<LOGINID::20090130>>
DN 137:184864
TI Nutritional advantages of probiotics and prebiotics
AU Marteau, P.; Boutron-Ruault, M. C.
CS Gastroenterology Department, Hopital Europeen Georges Pompidou, Paris, 75908, Fr.
SO British Journal of Nutrition (2002), 87(Suppl. 2), S153-S157
CODEN: BJNUAV; ISSN: 0007-1145
PB CABI Publishing
DT Journal; General Review
LA English
RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 21 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Intestinal microflora research for the 21st century
AB A review. Dietary modulation of the human gut microbiota is a topical area of nutritional sciences. This is driven by the fact that the gastrointestinal tract, particularly the colon, is very heavily populated. Undoubtedly, certain gut species are pathogenic and may be involved in the onset of acute and chronic disorder. However, most bacteria in the gut are benign, with the possibility that some groups are beneficial. Bifidobacteria and lactobacilli are thought to belong to this latter category and are common targets for dietary intervention that improves health. Dietary modulation of the human gut microflora by functional foods such as probiotics and prebiotics is designed to improve human health. A probiotic is a live microbial feed supplement, whereas a prebiotic is a non viable food ingredient selectively metabolised by intestinal bacterial species seen as beneficial. Examples of probiotics are lactobacilli and bifidobacteria, given in fermented milks or as lyophilised forms. Fructo-oligosaccharides, lactulose and galacto-oligosaccharides are all popular prebiotics in Europe. These have been shown in vivo to stimulate nos. of bifidobacteria in faecal samples. Many more types exist in Japan. Bifidobacteria and lactobacilli are thought to contribute many health promoting benefits towards the host. These include increased resistance to pathogenic bacteria, lowering blood ammonia, increased stimulation of the immune response and a reduction in the risk of cancer. New functional food developments are set, more than ever, to exploit probiotics and prebiotics. However, it is important that their use is underpinned by robust scientific principles and technologies.

AN 2002:297879 HCAPLUS <<LOGINID::20090130>>
DN 136:368957
TI Intestinal microflora research for the 21st century
AU Gibson, Glenn R.
CS Food Microbial Sciences Unit, School of Food Biosciences, The University of Reading, Reading, RG6 6AP, UK
SO Bioscience and Microflora (2002), 20(4), 131-134
CODEN: BIMIFM; ISSN: 1342-1441
PB Japan Bifidus Foundation
DT Journal; General Review
LA English
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 22 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI TOS, a new prebiotic derived from whey
AB A review. Worldwide there is a strong trend to ban the use of antibiotic growth promoters (AGP) in animal nutrition. Many companies are trying to develop new feed additives to replace the current AGP. Transgalactooligosaccharides (TOS) made by the Dutch company Borculo Domo Ingredients are a recent development in this area. TOS are prepared by enzymic conversion of whey lactose by β-glucosidase into oligosaccharides with 2-8 lactose units, leaving glucose as a byproduct. The com. product containing 60% TOS is called Lactifit. Data on Lactifit use in veal calves, broiler chickens, and humans are discussed. TOS can stimulate the growth of Bifidobacteria and other health-promoting bacteria, such as Lactobacilli, in the large intestinal environment.
AN 2002:204454 HCAPLUS <<LOGINID::20090130>>
DN 136:354579
TI TOS, a new prebiotic derived from whey
AU Ziggers, Dick
CS Neth.
SO Feed Mix (2001), 9(6), 7-9
CODEN: FEMIF4; ISSN: 0928-124X
PB Elsevier International Business Information
DT Journal; General Review
LA English

L9 ANSWER 23 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Prebiotic oligosaccharides via alternansucrase acceptor reactions
AB Alternansucrase synthesizes an α-(1 3),(1 6)-D-glucan via glucosyl transfer from sucrose. It also synthesizes oligosaccharides containing both types of linkages when acceptor sugars are present (Cote & Robyt, Carbohydr. Res. 111 (1982)127-142). We have used alternansucrase to synthesize oligosaccharides from maltose, maltodextrins, maltitol, cellobiose, raffinose, melibiose, lactose, and other acceptors. Anal. of the products shows that alternansucrase is better at catalyzing acceptor reactions when compared to dextransucrase, and that the structures of the products differ. Whereas dextransucrase generally makes only a single product from any given acceptor, alternansucrase often makes two or more, and in higher yields. Several of these oligosaccharide acceptor products have been isolated and tested for their ability to support the growth of probiotic bacteria, including strains of Lactobacillus and Bifidobacterium. Certain acceptor products supported growth of probiotic strains, but did not serve as substrates for undesirable bacteria such as Salmonella, Clostridium, or E. coli. The structures of the acceptor products and their potential as prebiotics will be discussed.
AN 2002:186281 HCAPLUS <<LOGINID::20090130>>
TI Prebiotic oligosaccharides via alternansucrase acceptor reactions
AU Cote, Gregory L.; Holt, Scott M.; Miller, Candace
CS Fermentation Biotechnology Research Unit, USDA ARS National Center for Agricultural Utilization Research, Peoria, IL, 61604, USA
SO Abstracts of Papers, 223rd ACS National Meeting, Orlando, FL, United States, April 7-11, 2002 (2002), CARB-036 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69CKQP
DT Conference; Meeting Abstract
LA English

L9 ANSWER 24 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI A comparative in vitro evaluation of the fermentation properties of

prebiotic oligosaccharides
AB Comparison of in vitro fermentation properties of com. prebiotic oligosaccharides. Populations of predominant gut bacterial groups were monitored over 24 h of batch culture through fluorescent in-situ hybridization. Short-chain fatty acid and gas production were also measured. All prebiotics increased the nos. of bifidobacteria and most decreased clostridia. Xylo-oligosaccharides and lactulose produced the highest increases in nos. of bifidobacteria while fructo-oligosaccharides produced the highest populations of lactobacilli. Galacto-oligosaccharides (GOS) resulted in the largest decreases in nos. of clostridia. Short-chain fatty acid generation was highest on lactulose and GOS. Gas production was lowest on isomalto -oligosaccharides and highest on inulin. The oligosaccharides differed in their fermentation characteristics. Isomalto-oligosaccharides and GOS were effective at increasing nos. of bifidobacteria and lactate while generating the least gas. The study provides comparative data on the properties of com. prebiotics, allowing targeting of dietary intervention for particular applications and blending of oligosaccharides to enhance overall functionality.
AN 2001:921704 HCAPLUS <<LOGINID::20090130>>
DN 136:339904
TI A comparative in vitro evaluation of the fermentation properties of prebiotic oligosaccharides
AU Rycroft, C. E.; Jones, M. R.; Gibson, G. R.; Rastall, R. A.
CS Food Microbial Sciences Unit, School of Food Biosciences, The University of Reading, Reading, RG6 6AP, UK
SO Journal of Applied Microbiology (2001), 91(5), 878-887
CODEN: JAMIFK; ISSN: 1364-5072
PB Blackwell Science Ltd.
DT Journal
LA English
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 25 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Investigations on the analytical determination of low-molecular weight dietary fibre
AB Food or food components, e.g. the water-soluble parts of cereals like rye and wheat contain close to one third of non-digestible components, which are not detected by the common anal. for dietary fiber (DF), e. g. the enzymic-gravimetric methods according to ICC (International Association of Cereal Science and Technol.), AOAC (Association of Official Anal. Chemists) or AACC (American Association of Cereal Chemists). According to these methods, the soluble DF is precipitated by addition of ethanol. All component which do not precipitate
in 78% ethanol, escape the determination and a gap in the anal. balance results.
Moreover, the low mol. dietary fiber are fermentable products for the microorganisms in the large intestine. The microbial metabolism may cause prebiotic effects. Low mol. dietary fiber opens up a new area of functional food products provided the amount is detectable. Therefore, a method had to be found, which completes the existing way of analyses as simple and reliable as possible. HPLC with RI-detector was found to fulfill the expectations.
AN 2001:914270 HCAPLUS <<LOGINID::20090130>>
DN 136:68917
TI Investigations on the analytical determination of low-molecular weight dietary fibre
AU Gebhardt, E.; Mersiowsky, E.; Habel, A.; Herrmann, U.; Thomann, R.
CS IGV Institut fur Getreideverarbeitung GmbH, Bergholz-Rehbruecke, D-14558, Germany

SO Ernaehrung (Vienna, Austria) (2001), 25(9), 341-347
CODEN: ERNRDC; ISSN: 0250-1554
PB Fachzeitschriftenverlagsgesellschaft mbH
DT Journal
LA German
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 26 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI The prebiotic effects of biscuits containing partially hydrolysed guar gum and fructo-oligosaccharides - a human volunteer study
AB Prebiotics are nondigestible food ingredients that target selected groups of human colonic microflora, thus altering the microbial composition in a more beneficial way by increasing the populations of bifidobacteria and/or lactobacilli. The prebiotic potential of partially hydrolyzed guar gum (PHGG) and fructooligosaccharides (FOS) contained in biscuits was assessed in 31 humans. Fluorescent in situ hybridization with oligonucleotide probes targeting Bacteroides, Bifidobacterium, Clostridium, and Lactobacillus-Enterococcus spp. was used for bacterial identification and the total bacteria were enumerated using the 4',6-diamidino-2-phenylindole fluorescent staining. The subjects consumed daily 3 biscuits (providing 6.6 g FOS and 3.4 g PHGG) or 3 placebo biscuits in two 21-day crossover periods. The Bifidobacteria counts increased after ingestion of the exptl. biscuits compared with placebo. The Bifidobacteria counts returned to pretreatment levels within 7 days after cessation of the exptl. biscuits intake. A correlation was found between the initial fecal Bifidobacteria counts and the magnitude of bifidogenesis; subjects with low initial Bifidobacteria counts experienced the greatest increase in bifidogenesis. No changes were observed in the other bacterial groups monitored. Thus, the prebiotic nature of FOS and PHGG was maintained in the final biscuit food product as evidenced from the selective increase in Bifidobacteria counts.
AN 2001:756726 HCAPLUS <<LOGINID::20090130>>
DN 136:36823
TI The prebiotic effects of biscuits containing partially hydrolysed guar gum and fructo-oligosaccharides - a human volunteer study
AU Tuohy, K. M.; Kolida, S.; Lustenberger, A. M.; Gibson, G. R.
CS Food Microbial Sciences Unit, School of Food Biosciences, University of Reading, Reading, RG6 6AP, UK
SO British Journal of Nutrition (2001), 86(3), 341-348
CODEN: BJNUAV; ISSN: 0007-1145
PB CABI Publishing
DT Journal
LA English
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 27 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Prebiotics and probiotics for gastrointestinal health
AB A review. Research data suggest that probiotics and prebiotics, which both influence the endogenous gastrointestinal microflora, may have a role in therapy of human diseases, especially in the prevention of digestive diseases. The current knowledge on the probiotics and prebiotics fate in the gastrointestinal tract (survival, adherence, colonization, metabolism), mechanisms of action, potential adverse effects, and proven effects are discussed. Data from randomized controlled trials using various probiotics to treat lactose intolerance, antibiotic associated diarrhea, gastroenteritis, intestinal infections and colonization by pathogenic bacteria, and inflammatory bowel disease are

summarized. Data from randomized controlled trials using prebiotics to treat constipation and hepatic encephalopathy are also discussed. Potential probiotics and prebiotics applications, especially in colon cancer prevention, are mentioned.
AN 2001:608872 HCAPLUS <<LOGINID::20090130>>
DN 136:53058
TI Prebiotics and probiotics for gastrointestinal health
AU Marteau, P.
CS Gastroenterology Unit, European Hospital Georges Pompidou, AP-HP, Paris, 75015, Fr.
SO Clinical Nutrition (2001), 20(Suppl. 1), 41-45
CODEN: CLNUDP; ISSN: 0261-5614
PB Harcourt Publishers Ltd.
DT Journal; General Review
LA English
RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 28 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Modulation of the intestinal ecosystem by probiotics and lactulose in children during treatment with ceftriaxone
AB Background: The value of oral bacteriotherapy during antibiotic treatment is a much debated subject. Comparative studies on the effects of different probiotics on the intestinal ecosystem are lacking. Objective: Six different com. available prepns. of probiotics and 1 prebiotic (lactulose) were compared to establish whether their action prevented or corrected imbalances in the intestinal ecosystem (dysbiosis) during parenteral therapy with ceftriaxone. Methods: Fifty-one children (25 female, 26 male; mean age, 5.1 yr) admitted to the hospital for febrile respiratory tract infections were treated. Ceftriaxone 50 mg/kg per day was administered parenterally alone (therapy 1) or with 1 of the following probiotic/prebiotic prepns.: Saccharomyces boulardii (therapy 2); Enterococcus species (therapy 3); lactulose (therapy 4); Lactobacillus casei GG (therapy 5); Lactobacillus rhamnosus, Lactobacillus bifidus, and Lactobacillus acidophilus (therapy 6); Bifidobacterium bifidum and L acidophilus (therapy 7): or a mixture of various lactobacilli and bifidobacteria at high concns. (therapy 8). Intestinal microflora were evaluated by standard microbiol. methods and by biochem. assays on fecal samples collected before and after treatment. Results: Ceftriaxone induced a decrease in Escherichia coli and lactobacilli counts and an increase in cocci and clostridia counts. Partial protection of the intestinal ecosystem (eubiosis) was achieved with therapies 6, 7, and 8, which contained different combinations of Lactobacillus and Bifidobacterium species. Probiotics containing lactobacilli were more active than the older Saccharomyces and Enterococcus prepns. The newer probiotics reduced β-galactosidase, β-glucosidase, and β-glucuronidase levels. Increased fecal β-lactamase activity was observed in 60% of patients treated with ceftriaxone alone and 75% of those treated with ceftriaxone and S boulardii. A lower incidence of betalactamase-pos. samples (30%-40%) was observed with therapy 7 and therapy 8. Conclusions: In this preliminary study, probiotics containing multiple species of lactobacilli and bifidobacteria administered at high concentration (20
billion to 360 billion per day) were more effective in preventing dysbiosis induced by ceftriaxone treatment than were other prepns. studied. Probiotic therapy may need to be maintained for several days after discontinuation of antibiotic treatment to adequately restore balance to the intestinal ecosystem.
AN 2001:498631 HCAPLUS <<LOGINID::20090130>>
DN 135:283004

TI Modulation of the intestinal ecosystem by probiotics and lactulose in children during treatment with ceftriaxone
AU Zoppi, Giuseppe; Cinquetti, Mauro; Benini, Anna; Bonamini, Elettra; Minelli, Elisa Bertazzoni
CS Department of Paediatrics, University of Verona, Verona, Italy
SO Current Therapeutic Research (2001), 62(5), 418-435
CODEN: CTCEA9; ISSN: 0011-393X
PB Excerpta Medica, Inc.
DT Journal
LA English
RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 29 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Synthesis and fermentation properties of novel galacto-oligosaccharides by β-galactosidases from Bifidobacterium species
AB β-Galactosidase enzymes were extracted from pure cultures of Bifidobacterium angulatum, B. bifidum BB-12, B. adolescentis ANB-7, B. infantis DSM-20088, and B. pseudolongum DSM-20099 and used in glycosyl transfer reactions to synthesize oligosaccharides from lactose. At a lactose concentration of 30% (wt/wt) oligosaccharide yields of 24.7 to 47.6% occurred within 7 h. Examination of the products by thin-layer chromatog. and methylation anal. revealed distinct product derived spectra from each enzyme. These were found to be different to that of Oligomate 55, a com. prebiotic galacto-oligosaccharide. Fermentation testing of the oligosaccharides showed an increase in growth rate, compared to Oligomate 55, with products derived from B. angulatum, B. bifidum, B. infantis, and B. pseudolongum. However B. adolescentis had a lower growth rates on its oligosaccharide compared with Oligomate 55. Mixed culture testing of the B. bifidum BS-4 oligosaccharide showed that the overall prebiotic effect was equivalent to that of Oligomate 55.
AN 2001:424131 HCAPLUS <<LOGINID::20090130>>
DN 135:151886
TI Synthesis and fermentation properties of novel galacto-oligosaccharides by β-galactosidases from Bifidobacterium species
AU Rabiu, Bodun A.; Jay, Andrew J.; Gibson, Glenn R.; Rastall, Robert A.
CS Division of Food Microbial Sciences, School of Food Biosciences, The University of Reading, Reading, RG6 6AP, UK
SO Applied and Environmental Microbiology (2001), 67(6), 2526-2530
CODEN: AEMIDF; ISSN: 0099-2240
PB American Society for Microbiology
DT Journal
LA English
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 30 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Composition comprising micronutrients in combination with prebiotics, probiotics, and/or synbiotics
AB A composition useful for enhancing general immunity is disclosed. The composition includes one or more micronutrients, one or more compds. selected from the group of a prebiotic, probiotic, and synbiotic, and lipid-based or carbohydrate-based excipient. Use of this composition to enhance general immunity of the composition is provided. A method of enhancing the general immunity of a mammal is provided, comprising the steps of removing a composition comprising micro-encapsulated micronutrient granules, a substance selected from the group of a prebiotic, probiotic or synbiotic, and a pharmaceutically acceptable excipient selected from the group of a lipid-based excipient and a carbohydrate-based excipient from packaging material; adding a therapeutically effective amount of said composition to a

food, and administering the food to said mammal.
AN 2001:167822 HCAPLUS <<LOGINID::20090130>>
DN 134:206974
TI Composition comprising micronutrients in combination with prebiotics, probiotics, and/or synbiotics
IN Zlotkin, Stanley H.
PA Can.
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001015714	A1	20010308	WO 2000-CA990	20000828 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2281463	A1	20010226	CA 1999-2281463	19990826 <--
	CA 2347891	A1	20010308	CA 2000-2347891	20000828 <--
PRAI	CA 1999-2281463	A	19990826	<--	
	WO 2000-CA990	W	20000828	<--	

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 31 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Production of galacto-oligosaccharides from lactose by immobilized β-galactosidase
AB A review with 100 refs. Galacto-oligosaccharides (GOS) and oligosaccharides in general have received a lot of attention recently, mainly due to their many beneficial health effects and wide applications as prebiotic food. Production of GOS from lactose by enzyme reaction is reviewed in this paper. The enzyme β-galactosidase can be used to produce GOS containing 2 to 5 galactose units and one glucose unit from lactose. Depending on the enzyme source and reaction conditions, the GOS yield varied from below 20% to as high as 67% (weight/weight). In general, a higher initial lactose concentration gave a wider range of GOS types produced and increased GOS yield. Reactions in an organic solvent did not increase GOS production, but rapidly inactivated the enzyme. Using a com. enzyme from Aspergillus oryzae, a maximum GOS yield of .apprx.71%, based on lactose reacted, was obtained at low lactose conversions (.apprx.10%), but the yield decreased with increasing lactose conversion. An integrated immobilized enzyme reactor-separator process, which continuously removes GOS from the reaction media, would give the highest possible GOS yield (>65%) from lactose. Effects of enzyme immobilization and methods to sep. GOS, such as nanofiltration, are also discussed in this article.
AN 2001:107645 HCAPLUS <<LOGINID::20090130>>
DN 134:279589
TI Production of galacto-oligosaccharides from lactose by immobilized β-galactosidase
AU Yang, Shang-Tian; Bednarcik, Julia A.
CS Department of Chemical Engineering, The Ohio State University, Columbus, OH, 43210, USA

SO ACS Symposium Series (2001), 776(Applied Biocatalysis in Specialty Chemicals and Pharmaceuticals), 131-154
CODEN: ACSMC8; ISSN: 0097-6156
PB American Chemical Society
DT Journal; General Review
LA English
RE.CNT 100 THERE ARE 100 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 32 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Improved infant formula, protein hydrolysate for use in such an infant formula, and method for producing such a hydrolysate
AB The invention relates to an infant formula, comprising a) at least one protein component; and b) at least one lipid component that can be easily digested by an infant; and optionally one or two of: c) at least one prebiotic component; d) at least one viscosity improving component; and optionally one or more components of infant formula known per se, characterized in that: the protein component a) has a phosphorous content of less than 0.75 g P/100 g protein. The formula is preferably further characterized in that the at least one lipid component b) comprises at least one fatty acid triglyceride and/or a mixture of fatty acid triglycerides, in which: palmitic acid residues make up more than 10 % of all fatty acid residues present in the triglycerides; and the triglycerides in which the palmitate residue is in the Sn1- or Sn3-position make up no more than 16 % of all triglycerides present. The invention also relates to a method for preparing a protein hydrolyzate, in particular for use in the formula of the invention.
AN 2001:1126 HCAPLUS <<LOGINID::20090130>>
DN 134:55806
TI Improved infant formula, protein hydrolysate for use in such an infant formula, and method for producing such a hydrolysate
IN Bindels, Jacob Geert; Van Baalen, Antonie; Hageman, Robert Johan Joseph; Huybers, Peti; Dumon, Liliane-Rose Louisa Dominique
PA N.V. Nutricia, Neth.
SO Eur. Pat. Appl., 22 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1062873	A1	20001227	EP 1999-204287	19991213 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	EP 1557096	A1	20050727	EP 2005-75549	20000213 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	CA 2393269	A1	20010614	CA 2000-2393269	20001213 <--
	CA 2393269	C	20070220		
	WO 2001041581	A1	20010614	WO 2000-NL913	20001213 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 2001032420	A	20010618	AU 2001-32420	20001213 <--
	AU 771010	B2	20040311		

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     BR 2000016341          A     20020827    BR 2000-16341          20001213 <--
     EP 1237419             A1    20020911    EP 2000-991317         20001213 <--
     EP 1237419             B1    20050309
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     HU 2002003736          A2    20030328    HU 2002-3736           20001213 <--
     HU 2002003736          A3    20041228
     JP 2003515354          T     20030507    JP 2001-542764         20001213 <--
     NZ 519513              A     20040730    NZ 2000-519513         20001213 <--
     RU 2243698             C2    20050110    RU 2002-118715         20001213 <--
     AT 290320              T     20050315    AT 2000-991317         20001213 <--
     EP 1535520             A1    20050601    EP 2005-75390          20001213 <--
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, FI, CY, TR
     PT 1237419             T     20050729    PT 2000-991317         20001213 <--
     ES 2238339             T3    20050901    ES 2000-991317         20001213 <--
     CN 1236682             C     20060118    CN 2000-817116         20001213 <--
     CN 1788615             A     20060621    CN 2005-10127128       20001213 <--
     TW 250848              B     20060311    TW 2000-89127573       20001221 <--
     ZA 2002004504          A     20030605    ZA 2002-4504           20020605 <--
     NO 2002002751          A     20020812    NO 2002-2751           20020610 <--
     NO 325239              B1    20080303
     IN 2002CN00891         A     20070420    IN 2002-CN891          20020612 <--
     MX 2002PA05851         A     20031014    MX 2002-PA5851         20020613 <--
     US 20030072865         A1    20030417    US 2002-149986         20021011 <--
     US 6863918             B2    20050308
     HK 1049429             A1    20050520    HK 2003-101628         20030305 <--
PRAI EP 1999-204287         A     19991213  <--
     CN 2000-817116         A3    20001213  <--
     EP 2000-991317         A3    20001213  <--
     WO 2000-NL913          W     20001213  <--
RE.CNT  34    THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9   ANSWER 33 OF 40  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   In vitro growth behaviour of probiotic bacteria in culture media with
     carbohydrates of prebiotic importance
AB   The influence of a variety of prebiotic sugars (galacto-,
     manno-, fructooligosaccharides, lactulose and others) and basic
     carbohydrates on the growth of a selection of probiotic bifidobacteria (9
     strains), Lactobacillus acidophilus (8 strains) and other lactobacilli (9
     strains) was investigated by applying in vitro methodologies based on
     optical d. measurement.  It has been shown that some of the bacteria could
     markedly utilize the substrates but with pronounced variation, depending
     on the individual nature of the strains.  Besides their capability to grow
     in galacto- and fructooligosacharide containing media, a distinct growth in
     lactulose-based substrates was evident for most of the strains
     tested.  Results presented can be used for selecting probiotic strains and
     prebiotic sugars to form synbiotic formulations.
AN   2000:572720  HCAPLUS <<LOGINID::20090130>>
DN   134:28719
TI   In vitro growth behaviour of probiotic bacteria in culture media with
     carbohydrates of prebiotic importance
AU   Kneifel, Wolfgang; Rajal, Andreas; Kulbe, Klaus Dieter
CS   Department of Dairy Research & Bacteriology, University of Agricultural
     Sciences, Vienna, A-1180, Austria
SO   Microbial Ecology in Health and Disease (2000), 12(1), 27-34
     CODEN: MEHDE6; ISSN: 0891-060X
PB   Taylor & Francis
DT   Journal
LA   English
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RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 34 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI The isolation of lactic acid bacteria from human colonic biopsies after enrichment on lactose derivatives and rye arabinoxylo-oligosaccharides
AB Lactic acid bacteria (LAB) were isolated from human colon biopsies on LAMVAB by enrichment with different substrates such as lactose derivs., rye arabinoxylo-oligosaccharides and rye fractions. The selected isolates were tested for their ability to adhere to Caco-2 cells. Only Lactobacillus species were enriched under these conditions. From 161 isolates screened, 28% were identified by ribotyping as Lactobacillus rhamnosus, 29% as L. salivarius, 14% as L. cellobiosus, 13% as L. paracasei and the rest remained unidentified. L. rhamnosus was preferentially enriched by lactulose, L. salivarius by lactobionic acid, L. cellobiosus by lactitol and L. paracasei by arabinoxylo-oligosaccharides. The biopsy-derived strains L. rhamnosus E-97948 and L. paracasei E-97949 have potential for further evaluations in their probiotic and technol. properties. Lactulose may have prebiotic effects on colonic LAB by favoring their growth. (c) 2000 Academic Press.
AN 2000:65242 HCAPLUS <<LOGINID::20090130>>
DN 132:331941
TI The isolation of lactic acid bacteria from human colonic biopsies after enrichment on lactose derivatives and rye arabinoxylo-oligosaccharides
AU Kontula, P.; Suihko, M. -L.; Suortti, T.; Tenkanen, M.; Mattila-Sandholm, T.; von Wright, A.
CS VTT Biotechnology and Food Research, FIN-02044, Finland
SO Food Microbiology (2000), 17(1), 13-22
CODEN: FOMIE5; ISSN: 0740-0020
PB Academic Press
DT Journal
LA English
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 35 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Effects on parameters of glucose homeostasis in healthy humans from ingestion of leguminous versus maize starches
AB Due to their lower glycemic index, leguminous seeds affect human carbohydrate metabolism lesser than do cereals. Problems, however, could arise from side effects, e.g., increasing flatulence. In healthy, metabolic and symptomatic responses following acute ingestion of equivalent amts. of pure pea starch (NASTAR, Cosucra BV, Rosendaal/The Netherlands), crude yellow pea flour (CPC Deutschland, Germany), and modified and unmodified cornstarches (SNOWFLAKE and SIRONA, Cerestar/Germany) were assessed, i.e., blood plasma glucose, serum insulin, C-peptide, H exhalation, and flatulence. Pure pea starch elicited less hyperglycemia (-47%), hyperinsulinemia (-54%), and C-peptide secretion (-37%) as compared to cornstarch, while the responses to modified vs. unmodified corn starch were similar. Pure pea and corn starches were equally well tolerated, while flatulence and breath H concentration were increased only after the intake of crude pea flour. Maldigestion of pea flour was calculated to be 10% (reference lactulose). The well-known metabolic advantages of pea starch over cornstarch were confirmed. Tolerability of pure pea starch was excellent, but not of crude pea flour. Provided it has the same tech. characteristics, pure pea starch as a "prebiotic" could replace cornstarch in industrial food production

AN 1999:641673 HCAPLUS <<LOGINID::20090130>>
DN 131:256742
TI Effects on parameters of glucose homeostasis in healthy humans from ingestion of leguminous versus maize starches
AU Seewi, G.; Gnauck, G.; Stute, R.; Chantelau, E.
CS CPC Research Development Center, Heilbronn, D-74016, Germany
SO European Journal of Nutrition (1999), 38(4), 183-189
CODEN: EJNUFZ; ISSN: 1436-6207
PB Dr. Dietrich Steinkopff Verlag GmbH & Co. KG
DT Journal
LA English
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 36 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Inulin, oligofructose and intestinal function
AB A review with 26 refs. Inulin and oligofructose have attracted much attention as nonabsorbable carbohydrates with prebiotic properties. When inulin and oligofructose were added to a controlled diet, significant increases were noted in colonic bifidobacterial populations. These changes may promote both colonic and systemic health through modification of the intestinal microflora. Inulin and oligofructose are rapidly and completely fermented by the colonic microflora with the production of acetate and other short-chain fatty acids. As with lactulose, they may also result in the growth of the fecal biomass, and in doing so, entrap ammonia for bacterial protein synthesis or conversion to the ammonium ion. As with dietary fiber and other nonabsorbable carbohydrates, there is also interest in inulin and oligofructose for inhibition of colonic carcinogenesis, blood cholesterol decrease, immune stimulation, and enhanced vitamin synthesis. The influence of carbohydrate mol. weight is also an issue, with the longer chain lengths providing more sustained fermentation patterns. More human studies are needed, including studies on the long-term effects of inulin and oligofructose consumption on colonic health, in particular on markers of cancer risk such as decreased colonic polyp recurrence.
AN 1999:424058 HCAPLUS <<LOGINID::20090130>>
DN 131:169657
TI Inulin, oligofructose and intestinal function
AU Jenkins, David J. A.; Kendall, Cyril W. C.; Vuksan, Vladimir
CS Department of Nutritional Sciences, Faculty of Medicine, University of Toronto, Toronto, ON, M5S 1A8, Can.
SO Journal of Nutrition (1999), 129(7S), 1431S-1433S
CODEN: JONUAI; ISSN: 0022-3166
PB American Society for Nutritional Sciences
DT Journal; General Review
LA English
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 37 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Production of transgalactosylated oligosaccharides (TOS) by galactosyltransferase activity from Penicillium simplicissimum
AB Ingestion of transgalactosylated oligosaccharides and other non-digestible oligosaccharides (NDOs) induces a significant increase in Bifidobacterium, Lactobacillus and some desirable species of Streptococcus populations in the gut of human and other animals (prebiotic effect). This change in the intestinal flora is responsible for several beneficial physiol. effects such as a decrease of putrefactive products in the feces, lower blood cholesterol content, higher Ca2+ absorption, a smaller loss of bone tissue in ovariotomized female rats and a lower incidence of colon cancer. β-Galactosidase from P. simplicissimum, a

strain isolated from soil, showed high galactosyltransferase activity when incubated with a highly concentrated lactose solution Optimum pH temperature ranges for hydrolytic activity were 4.0-4.6 and 55-60°C, resp., for a lactose concentration of 5.0% (weight/volume). Maximal galactosyltransferase activity was obtained at pH 6.5 and 50°C and TOS synthesis was pos. associated with lactose concentration in the reaction medium. Thus, when 50 mL of a 60% (weight/volume) lactose solution was incubated with 26.6 U of β-galactosidase under the best ph and temperature conditions for transferase activity, a final product with 30.5% TOS (183 mg/mL), 27.5% residual lactose and 42.0% monosaccharides was obtained.

AN 1999:391090 HCAPLUS <<LOGINID::20090130>>
DN 131:169537
TI Production of transgalactosylated oligosaccharides (TOS) by galactosyltransferase activity from Penicillium simplicissimum
AU Cruz, Rubens; D'Arcadia Cruz, Vinicius; Belote, Juliana Gisele; De Oliveira Khenayfes, Marcelo; Dorta, Claudia; Dos Santos Oliveira, Luiza Helena; Ardiles, Eduardo; Galli, Alexandre
CS Dep. Ciencias Biologicas, Univ. Estadual Paulista, Brazil
SO Bioresource Technology (1999), 70(2), 165-171
CODEN: BIRTEB; ISSN: 0960-8524
PB Elsevier Science Ltd.
DT Journal
LA English
RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 38 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Prebiotics
AB A review with 77 refs. A range of non-digestible dietary supplements have now been identified that modify the balance of the intestinal microflora, stimulating the growth and/or activity of beneficial organisms and suppressing potentially deleterious bacteria. Termed "prebiotics" these supplements include lactulose, lactitol, a variety of oligosaccharides, and inulin. In particular, prebiotics promote the proliferation of bifidobacteria in the colon. The science of prebiotics is still in its infancy and as yet there is a dearth of reported clin. trials demonstrating clear efficacy in the prophylaxis or treatment of human disease. However, research to date indicates that prebiotics have potential to pos. influence human health. Prebiotics have shown promise in the prevention and control of exogenous and endogenous intestinal infections; control of serum triglycerides and cholesterol; improvement of mineral uptake; and reduction in putative risk factors for colon cancer. This review summarizes recent research into the impact of prebiotics on the microecol. in the human colon, and proposed mechanisms and effects of prebiotics on human health.
AN 1999:6074 HCAPLUS <<LOGINID::20090130>>
DN 130:196132
TI Prebiotics
AU Crittenden, Ross G.
CS Food Science Australia Melbourne Laboratory, Highett, 3190, Australia
SO Probiotics (1999), 141-156. Editor(s): Tannock, Gerald W.
Publisher: Horizon Scientific Press, Norfolk, UK.
CODEN: 67CUAP
DT Conference; General Review
LA English
RE.CNT 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 39 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI An overview of probiotics, prebiotics and synbiotics in the functional

food concept: perspectives and future strategies
AB A review with 39 refs. In recent years the functional food concept has moved progressively towards the development of dietary supplementation that may affect gut microbial composition and activities. The rationale derives from the fact that the human colon contains pathogenic, benign and possibly health promoting microbial species. These microbiota cause that the colon is metabolically the most active organ in the body and has significant nutritional roles. Diet is a feasible route by which the large gut microbiota composition and activities can be modulated. Probiotics are live microbial food addns. that have been in use for some time and are available in many food products, primarily fermented milks. Bacteria producing lactic acid and perceived to exert beneficial properties such as improved lactose digestion and resistance to pathogens are common probiotics. Prebiotics are nondigestible food ingredients (e.g. oligosaccharides) that have a selective fermentation in the colon. Fructose oligosaccharides can modify the gut flora composition in favor of bifidobacteria. Prebiotics have been hitherto used for genus level changes and do not suffer the survivability difficulties that may arise with probiotics. Other strategies may exploit both technologies together (as synbiotics). Future perspectives that allow a more full description of the gut biodiversity and accurately monitor changes in response to diet, will help to determine the role of probiotics, prebiotics and synbiotics in health promotion.
AN 1998:755403 HCAPLUS <<LOGINID::20090130>>
DN 130:138626
TI An overview of probiotics, prebiotics and synbiotics in the functional food concept: perspectives and future strategies
AU Ziemer, Cherie J.; Gibson, Glenn R.
CS Institute of Food Research, Earley Gate, Reading, RG6 6BZ, UK
SO International Dairy Journal (1998), 8(5/6), 473-479
CODEN: IDAJE6; ISSN: 0958-6946
PB Elsevier Science Ltd.
DT Journal; General Review
LA English
RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 40 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Immunonutrition: role of biosurfactants, fiber, and probiotic bacteria
AB A review with 137 refs. Phospholipids constitute an important part of cellular membranes, and membrane fluidity and permeability are dependent on the fatty acid composition of the phospholipid. The composition, which changes with aging and disease is, to a large degree, influenced by nutrient supply. Phospholipids have been effective in protecting cellular membranes such as those of the gastrointestinal tract to an extent not much different from that observed with external supply of established mucosa-protective drugs such as misoprostol and sucralfate. Polar lipids have also been shown to be effective in preventing microbial translocation. The effect is further potentiated by an external supply of probiotic fibers such as pectin, guar gum, and oat gum. These and many other fibers also have documented strong mucosa preventive effects. Prebiotic bacteria such as Lactobacillus plantarum have demonstrated a strong ability to preserve food and prevent spoilage. In addition, L. plantarum seems to not only preserve key nutrients such as ω-3 fatty acids, but also increases its content during storage conditions. L. plantarum alone or in combination with various fibers has demonstrated a strong ability to reduce and eliminate potentially pathogenic microorganisms both in vitro and in vivo. It has recently been shown that L. plantarum possesses the ability to adhere to and colonize intestinal mucosa. It seems unique among the lactobacilli for L.

plantarum to use mannose-specific adhesins, uncommon among gram-pos., but common among gram-neg. bacteria, which makes it possible that L. plantarum competes with gram-neg. potential pathogens for receptor sites at the mucosal cell surfaces. Addnl., L. plantarum seems to be effective in eliminating nitrate and producing nitric oxide. These functions of L. plantarum are among the reasons why it has been used in combination with various fibers and polar lipids to recondition the gastrointestinal mucosa. For the purpose of a L. plantarum-containing formula being produced and tried, a treatment policy is regarded as an extension of the immunonutrition program and called ecoimmunonutrition.

AN 1998:523538 HCAPLUS <<LOGINID::20090130>>
DN 129:244453
OREF 129:49767a,49770a
TI Immunonutrition: role of biosurfactants, fiber, and probiotic bacteria
AU Bengmark, Stig
CS Ideon Research Center, Lund University, Lund, S223-70, Swed.
SO Nutrition (New York) (1998), 14(7/8), 585-594
CODEN: NUTRER; ISSN: 0899-9007
PB Elsevier Science Inc.
DT Journal; General Review
LA English
RE.CNT 137 THERE ARE 137 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 14:43:33 ON 30 JAN 2009)

FILE 'HCAPLUS' ENTERED AT 14:43:55 ON 30 JAN 2009
L1 32931 S OLIGOSACCHARIDE
L2 114856 S MANNO OR MANNOSE OR ISOMALTO OR ISOMALTOSE OR GENTIO OR GENTI
L3 6385 S L1 AND L2
L4 76010 S CAESINOGLYCOMACROPEPTIDE OR GUAR OR GALACTOMANNAN OR LACTOSE
L5 81984 S L3 OR L4
L6 172759 S PREBIOTIC OR ENTERIC OR GUT OR INTESTINAL
L7 3858 S L5 AND L6
L8 2624 S L7 AND (PY<2003 OR AY<2003 OR PRY<2003)
L9 40 S L8 AND PREBIOTIC

=> log hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	132.50	132.72
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-31.98	-31.98

SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 14:47:09 ON 30 JAN 2009

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

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LOGINID:SSPTAEXO1623

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'HCAPLUS' AT 16:14:37 ON 30 JAN 2009
FILE 'HCAPLUS' ENTERED AT 16:14:37 ON 30 JAN 2009
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY    SESSION
FULL ESTIMATED COST                                  132.50     132.72

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                      ENTRY    SESSION
CA SUBSCRIBER PRICE                                  -31.98     -31.98

=> s caseinoglycomacropeptide or glycomacropeptide
           16 CASEINOGLYCOMACROPEPTIDE
          244 GLYCOMACROPEPTIDE
L10       257 CASEINOGLYCOMACROPEPTIDE OR GLYCOMACROPEPTIDE

=> s caseinoglycomacropeptide
L11        16 CASEINOGLYCOMACROPEPTIDE

=> s l11 and (PY<2003 or AY<2003 or PRY<2003)
    22983114 PY<2003
     4503368 AY<2003
     3972163 PRY<2003
L12        14 L11 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> d l12 1-14 ti abs bib

L12  ANSWER 1 OF 14  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Sugar-based compositions containing caseinoglycomacropeptide
AB   The invention relates to a sugar-based composition which contains
     caseinoglycomacropeptide (CGMP) and/or its derivs., the product
     having a beneficial impact on oral health, and in particular an inhibitory
     effect on caries and dentinal fissure lesions.  Thus, a chewing gum was
     prepared from CMCGMP 5, sucrose 67.5, gum base 20, CaCO3 5, glycerin 3,
     Pluronic-F127 2, cellulose gum 1, Balast compds. 0.5, and flavor 1%.
AN   2002:964101  HCAPLUS <<LOGINID::20090130>>
DN   138:29140
TI   Sugar-based compositions containing caseinoglycomacropeptide
IN   Neeser, Jean-Richard; Guggenheim, Bernhard; Fern, Edward Brian
PA   Societe des Produits Nestle S.A., Switz.
SO   PCT Int. Appl., 18 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   WO 2002100181        A2    20021219    WO 2002-EP5830         20020527 <--
     WO 2002100181        A3    20040212
         W:  AE, AG, AL, AM, AU, BB, BG, BR, CA, CN, CO, CR, CU, CZ, DM, DZ,
             EC, GD, GE, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LS, MA,
             MG, MN, MW, MX, NO, NZ, OM, PH, PL, RO, RU, SD, SG, SK, SL, TN,
             TR, TT, TZ, UA, UG, US, VN, ZA
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,
             GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,
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            GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU 2002345773        A1     20021223    AU 2002-345773         20020527 <--
PRAI EP 2001-202208       A      20010608  <--
     WO 2002-EP5830       W      20020527  <--
RE.CNT  6     THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12  ANSWER 2 OF 14  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Bone health compositions derived from milk
AB   The invention relates to bone health compns. comprising an acidic protein
     fraction of milk, to a method of producing the bone health composition, to
     methods of treatment comprising the bone health compns. and to medicinal
     uses of the compns.  One broad aspect of the invention provides a bone
     health composition comprising an acidic protein fraction derived from milk,
     from a component of milk, from whey, from hydrolyzates, or from a
     combination, or from a combination wherein the composition does not comprise
     caseinoglycomacropeptide (CGMP).  Another broad aspect provides a
     method of manufacturing the composition of the invention by using anion
exchange
     chromatog.  A solution of mineral acid whey protein concentrate (Alacen 342)
at 10%
     solids and pH 4.5 was passed through a column of Q-Sepharose BB.  The
     column was washed with water and eluted with a pH 6.0n1.0M solution of sodium
     chloride.  The acidic protein fraction eluted from the column was concentrated
     6.25-fold by using an Amicon 3K NMCO ultrafiltration unit.  The concentrated
     protein retentate was dialyzed against water and then freeze dried.  The
     dry product had a content of 79% protein, <0.5% calcium, approx. 1.0%
     phosphorous and 6.0% sialic acid.  Osteopontin, α-s1-casein
     fragments, sialylated and/or phosphorylated minor proteins, proteose
     peptones 5 and 3, and peptides derived from these proteins were present in
     the acidic protein fraction recovered from mineral acid whey.
AN   2002:275810  HCAPLUS <<LOGINID::20090130>>
DN   136:299740
TI   Bone health compositions derived from milk
IN   Reid, Ian Reginald; Cornish, Jill; Haggarty, Neill Ward; Palmano, Kate
PA   New Zealand Dairy Board, N. Z.
SO   PCT Int. Appl., 33 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   WO 2002028413       A1     20020411    WO 2001-NZ200         20010927 <--
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
             PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
             US, UZ, VN, YU, ZA, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     NZ 507335            A      20041029    NZ 2000-507335        20001005 <--
     AU 2001090388        A      20020415    AU 2001-90388         20010927 <--
     EP 1328286           A1     20030723    EP 2001-970387        20010927 <--
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     HU 2003002304        A2     20031028    HU 2003-2304          20010927 <--
     HU 2003002304        A3     20040301
     BR 2001014471        A      20040113    BR 2001-14471         20010927 <--
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     JP 2004510742        T     20040408    JP 2002-532237         20010927 <--
     AU 2001290388        B2    20040617    AU 2001-290388         20010927 <--
     TW 271154            B     20070121    TW 2001-90124531       20011004 <--
     KR 846011            B1    20080711    KR 2003-704843         20030404 <--
     US 20040052860       A1    20040318    US 2003-398628         20031010 <--
PRAI NZ 2000-507335       A     20001005  <--
     WO 2001-NZ200        W     20010927  <--
RE.CNT  6     THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12  ANSWER 3 OF 14  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   caseinoglycomacropeptide for inhibiting adhesion of the
     pathogenic flora of the skin
AB   The invention relates to the use of a casein derivative for the preparation of
a
     composition for cosmetic, pharmaceutical or veterinary use, intended to be
     administered to humans or to animals for the purpose of preventing or
     treating disorders induced by the pathogens of the cutaneous system.
     Caseinoglycomacropeptides were obtained from bovine whey and included in
     cosmetic and pharmaceutical formulations.
AN   2002:71895  HCAPLUS <<LOGINID::20090130>>
DN   136:123677
TI   caseinoglycomacropeptide for inhibiting adhesion of the
     pathogenic flora of the skin
IN   Neeser, Jean-Richard; Auzanneau, Isabelle
PA   Societe des Produits Nestle S.A., Switz.
SO   PCT Int. Appl., 23 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.           KIND   DATE        APPLICATION NO.        DATE
     ---------------      ----   --------    -------------------    --------
PI   WO 2002005839        A1     20020124    WO 2001-EP7293         20010628 <--
          W:  AE, AU, BR, CA, CN, CO, CR, CZ, DM, HU, ID, IL, IN, JP, KR, MA,
              MX, NO, NZ, PL, SG, TR, US, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
              DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
              BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     CA 2415918           A1     20020124    CA 2001-2415918        20010628 <--
     EP 1303295           A1     20030423    EP 2001-967094         20010628 <--
     EP 1303295           B1     20060913
          R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, FI, CY, TR
     JP 2004503597        T      20040205    JP 2002-511771         20010628 <--
     AT 339217            T      20061015    AT 2001-967094         20010628 <--
     ES 2272535           T3     20070501    ES 2001-967094         20010628 <--
     US 20030161850       A1     20030828    US 2003-332879         20030418 <--
PRAI EP 2000-115274       A      20000714  <--
     WO 2001-EP7293       W      20010628  <--
RE.CNT  11    THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12  ANSWER 4 OF 14  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Use of a milk protein hydrolysate in the treatment of diabetes
AB   Use of a milk protein hydrolyzate which is preferably a whey protein
     hydrolyzate or caseinoglycomacropeptide (CGMP) in a bioavailable
     form in the manufacture of a composition for the treatment or prevention of
diabetes
     or syndrome X and a method of treatment or prevention of diabetes or
     syndrome X are described.  The present invention also relates to a method
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for assessing proglucagon gene expression and GLP-1 release by a cell line derived from an adenocarcinoma of human cecum.

AN 2001:396682 HCAPLUS <<LOGINID::20090130>>

DN 134:361380

TI Use of a milk protein hydrolysate in the treatment of diabetes

IN Reimer, Raylene; Darimont-nicolau, Christian; Mace, Katherine; Gremlich, Sandrine; Neeser, Jean-richard

PA Societe Des Produits Nestle S.A., Switz.

SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001037850	A2	20010531	WO 2000-EP10716	20001027 <--
	WO 2001037850	A3	20020110		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1235585	A2	20020904	EP 2000-977445	20001027 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	US 20030004095	A1	20030102	US 2002-153531	20020521 <--
	US 20050186558	A1	20050825	US 2005-110093	20050419 <--
PRAI	GB 1999-27603	A	19991122	<--	
	WO 2000-EP10716	W	20001027	<--	
	US 2002-153531	A3	20020521	<--	

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Capillary electrophoresis and high-performance anion exchange chromatography for monitoring caseinoglycomacropeptide sialylation

AB Capillary zone electrophoresis was applied to sep. caseinoglycomacropeptide glycoforms and characterize microheterogeneity of the glycopeptide. Particular attention was paid to the sialic acid content in caseinoglycomacropeptide obtained through different manufacturing processes. A chemometric approach was used to simultaneously study effects of acid concentration, hydrolysis time and temperature on sialic acid release from caseinoglycomacropeptide. Hydrolysis conditions that maximize sialic acid release were chosen. Sialic acid was determined using high performance anion exchange chromatog. coupled with pulsed amperometric detection. Results were compared to those obtained by alternative techniques, such as colorimetric and enzymic methods.

AN 2001:182557 HCAPLUS <<LOGINID::20090130>>

DN 134:323084

TI Capillary electrophoresis and high-performance anion exchange chromatography for monitoring caseinoglycomacropeptide sialylation

AU Daali, Y.; Cherkaoui, S.; Veuthey, J.-L.

CS Laboratory of Pharmaceutical Analytical Chemistry, University of Geneva, Geneva, 1211, Switz.

SO Journal of Pharmaceutical and Biomedical Analysis (2001), 24(5-6), 849-856
CODEN: JPBADA; ISSN: 0731-7085
PB Elsevier Science B.V.
DT Journal
LA English
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Milk protein hydrolysate for addressing a bone or dental disorder
AB A composition for prevention or treatment of a bone or dental disorder comprises a milk protein hydrolyzate, use of the milk protein hydrolyzate in the manufacture of a composition for the treatment or prevention of a bone or
dental disorder, and a method of treatment which comprises administering an effective amount of a milk protein hydrolyzate. In preferred embodiments the milk protein hydrolyzate is a hydrolyzate of casein, in particular a caseinoglycomacropeptide (CGMP), a mimetic, homolog or fragment thereof in a bioavailable form which retains the ability of CGMP to inhibit bone resorption or bone loss; or favor calcium absorption, retention or calcification; or a combination thereof.
AN 2000:608529 HCAPLUS <<LOGINID::20090130>>
DN 133:183024
TI Milk protein hydrolysate for addressing a bone or dental disorder
IN Neeser, Jean-Richard; Offord Cavin, Elizabeth; Felix, Rolf; Tullberg-Reinert, Heidi; Ginty, Fiona; Barclay, Denis; Muhlbauer, Roman
PA Societe des Produits Nestle S.A., Switz.
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000049885	A1	20000831	WO 2000-EP1562	20000225 <--
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1062876	A1	20001227	EP 1999-200544	19990225 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CA 2360490	A1	20000831	CA 2000-2360490	20000225 <--
	EP 1154701	A1	20011121	EP 2000-910712	20000225 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	BR 2000008427	A	20020129	BR 2000-8427	20000225 <--
	JP 2002537313	T	20021105	JP 2000-600503	20000225 <--
	MX 2001006822	A	20011001	MX 2001-6822	20010703 <--
	ZA 2001007831	A	20021223	ZA 2001-7831	20010921 <--
PRAI	EP 1999-200544	A	19990225 <--		
	WO 2000-EP1562	W	20000225 <--		

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Determination of the stability of caseinoglycomacropeptide in a cosmetic lotion by use of capillary zone electrophoresis with a coated capillary

AB A capillary zone electrophoretic method is described for the determination of a caseinoglycomacropeptide. The optimized conditions employed a poly(vinyl alc.)-coated capillary and 50 mM phosphate buffer at pH 2.5 to enable baseline separation of several glyco forms. The method was validated and performance was good in terms of precision (both peak area and migration time), selectivity, linearity, and accuracy. The method was used to determine caseinoglycomacropeptide (2% weight/weight) in a cosmetic lotion. The validated method was finally used to monitor the stability of this caseinoglycomacropeptide in the cosmetic lotion over a period of four months.

AN 1999:652461 HCAPLUS <<LOGINID::20090130>>
DN 131:262481

TI Determination of the stability of caseinoglycomacropeptide in a cosmetic lotion by use of capillary zone electrophoresis with a coated capillary

AU Cherkaoui, S.; Pitre, F.; Neeser, J.-R.; Veuthey, J.-L.
CS Laboratory Pharmaceutical Analytical Chemistry, Univ. Geneva, Geneva, CH-1211, Switz.

SO Chromatographia (1999), 50(5/6), 311-316
CODEN: CHRGB7; ISSN: 0009-5893
PB Friedrich Vieweg & Sohn Verlagsgesellschaft mbH
DT Journal
LA English
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Development of a capillary zone electrophoresis method for caseinoglycomacropeptide determination

AB Caseinoglycomacropeptide (CGMP) is a polypeptide of 64 amino acid residues, derived from the C-terminal part of bovine κ-casein. A sensitive and selective capillary zone electrophoresis method has been developed and validated for the anal. and quantitation of CGMP. Separation is carried out at 30 kV, using an uncoated fused-silica capillary and 20 mM sodium citrate buffer at acidic pH 3.5. The described method allows the separation of various CGMP subcomponents. The validation data proves that the method has the requisite selectivity, sensitivity, reproducibility and linearity for CGMP assay and for quality control during CGMP manufacturing (batch-to-batch reproducibility).

AN 1997:734279 HCAPLUS <<LOGINID::20090130>>
DN 128:151329
OREF 128:29729a,29732a

TI Development of a capillary zone electrophoresis method for caseinoglycomacropeptide determination

AU Cherkaoui, Samir; Doumenc, Nathalie; Tachon, Pierre; Neeser, Jean-Richard; Veuthey, Jean-Luc
CS Boulevard d'Yvoy 20, Laboratory of Pharmaceutical Analytical Chemistry, University of Geneva, 1211 Geneva 4, Switz.

SO Journal of Chromatography, A (1997), 790(1 + 2), 195-205
CODEN: JCRAEY; ISSN: 0021-9673
PB Elsevier Science B.V.
DT Journal
LA English

L12 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Incorporation of caseinoglycomacropeptide and caseinophosphopeptide into the salivary pellicle inhibits adherence of mutans streptococci

AB The protective effects of milk and milk products against dental caries have been demonstrated in many animal studies. We have shown that this effect was mediated by micellar casein or caseinopeptide derivs. A reduction in the Streptococcus sobrinus population in the oral microbiota of animals fed diets supplemented with these milk components was consistently observed A possible explanation for these findings is that milk components are incorporated into the salivary pellicle, thereby reducing the adherence of S. sobrinus. This hypothesis was tested in vitro by the incubation of bovine enamel disks with unstimulated saliva. The resulting pellicle was washed and incubated with caseinoglycomacropeptide (CGMP) and/or caseinophosphopeptide (CPP) labeled with 17- and 12-nm gold particles. All samples were prepared for electron microscopy by high-pressure freezing followed by freeze-substitution. It was demonstrated by high-resolution SEM with back-scattered electron imaging, as well as by TEM, that both peptides were incorporated into the pellicle in exchange for albumin, confirming previous findings. This protein was identified with a mouse anti-human serum albumin followed by goat anti-mouse IgG labeled with 25-nm gold particles. Incorporation of CGMP and/or CPP into salivary pellicles reduced the adherence of both S. sobrinus and S. mutans significantly. It is suggested that the calcium-and phosphate-rich micellar casein or caseinopeptides are incorporated into the pellicle. The resulting ecol. shifts, together with the increased remineralization potential of this biofilm, may explain its modified cariogenic potential.
AN 1997:25629 HCAPLUS <<LOGINID::20090130>>
DN 126:73067
OREF 126:14105a,14108a
TI Incorporation of caseinoglycomacropeptide and caseinophosphopeptide into the salivary pellicle inhibits adherence of mutans streptococci
AU Schupbach, P.; Neeser, J. R.; Golliard, M.; Rouvet, M.; Guggenheim, B.
CS Institute Oral Microbiology and General Immunology, University Zurich, Zurich, CH-8028, Switz.
SO Journal of Dental Research (1996), 75(10), 1779-1788
CODEN: JDREAF; ISSN: 0022-0345
PB International Association for Dental Research
DT Journal
LA English
RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2009 ACS on STN
TI In vitro modulation of oral bacterial adhesion to saliva-coated hydroxyapatite beads by milk casein derivatives
AB Bovine caseinate, derivs. of its glycosylated moiety [caseinoglycomacropeptide (CGP)], and caseinophosphopeptides were evaluated as inhibitors of adhesion of oral bacteria to saliva-coated hydroxyapatite beads (S-HA). All milk casein-derived components behaved as potent inhibitors of Streptococcus sanguis OMZ 9 and Streptococcus sobrinus OMZ 176 adhesion to S-HA, whereas neither bovine serum albumin nor polyethyleneglycol were able to interfere with the adhesion of these strains. By contrast, none of the mol. species tested was able to inhibit the attachment of Actinomyces viscosus Ny 1 to S-HA. On the other hand, casein derivs. were shown to displace human serum albumin from S-HA beads. They were also able to bind to the bacterial cell surface of all strains examined Collectively, these findings suggest that interactions between acidic casein-derived milk components and the biol. surfaces involved in bacterial adhesion to S-HA result in an inhibitory effect that is selective for the oral streptococci examined
AN 1994:651086 HCAPLUS <<LOGINID::20090130>>
DN 121:251086
OREF 121:45743a,45746a

TI In vitro modulation of oral bacterial adhesion to saliva-coated hydroxyapatite beads by milk casein derivatives
AU Neeser, J-R; Golliard, M; Woltz, A; Rouvet, M; Dillmann, M-L; Guggenheim, B
CS Nestle Research Centre, Nestec Limited, Lausanne, Switz.
SO Oral Microbiology and Immunology (1994), 9(4), 193-201
CODEN: OMIMEE; ISSN: 0902-0055
DT Journal
LA English

L12 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Oligosaccharides and glycoproteins in bovine milk and colostrum
AB A review with 85 refs. This report presents a brief summary of the occurrence of glycoproteins in bovine milk and colostrum, with emphasis on their oligosaccharide structure. Glycoproteins discussed are κ-casein and the caseinoglycomacropeptide, Igs, lactoferrin, fibronectin, glyco-α-lactalbumin, M-1 acidic glycoprotein, fat globule membrane glycoproteins, proteose-peptone glycoproteins and lactoperoxidase. An overview of the free oligosaccharides found in bovine milk and colostrum is also given.
AN 1994:506730 HCAPLUS <<LOGINID::20090130>>
DN 121:106730
OREF 121:19251a,19254a
TI Oligosaccharides and glycoproteins in bovine milk and colostrum
AU Hall, David W.
CS Gracefield Res. Cent., Lower Hutt, Neth.
SO Ind. Res. Ltd. Rep. (1994), 165, 28 pp.
CODEN: IRLRED
DT Report; General Review
LA English

L12 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Characterization of bovine colostral proteins with inhibitory activity in passive cutaneous anaphylaxis.
AB Addition of skim milk prepared from bovine colostrum to rabbit antiroyal jelly protein antiserum inhibited passive cutaneous anaphylactic reaction (PCA) in guinea pigs. The inhibitory components were identified as κ-casein and lactoferrin. Both κ-casein and lactoferrin did not antigenically react with the rabbit antiroyal jelly protein antiserum. The inhibitory activity was not detected in κ-caseinoglycomacropeptide (residues 106-169). κ-Casein showed increased inhibitory activity when S-carboxymethylated after reduction with 2-mercaptoethanol, and showed decreased inhibitory activity when digested with chymotrypsin. Apolactoferrin inhibited the PCA reaction, while iron-saturated lactoferrin did not. The inhibitory activity of apolactoferrin increased by pepsin digestion. κ-Casein, apolactoferrin and pepsin-digest of lactoferrin inhibited the PCA reaction not only when these proteins were administered simultaneously with the sensitizing antiserum but also when injected together with the antigen. Thus, κ-casein and lactoferrin act on the release phase of vasoactive amine or later phase during passive cutaneous anaphylactic reaction.
AN 1994:268604 HCAPLUS <<LOGINID::20090130>>
DN 120:268604
OREF 120:47567a
TI Characterization of bovine colostral proteins with inhibitory activity in passive cutaneous anaphylaxis.
AU Otani, H.; Yamada, Y.
CS Fac. Agric., Shinshu Univ., Minamiminowa, 399-45, Japan
SO Milchwissenschaft (1994), 49(1), 20-4
CODEN: MILCAD; ISSN: 0026-3788

DT Journal
LA English

L12 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Specific and nonspecific inhibition of adhesion of oral actinomyces and streptococci to erythrocytes and polystyrene by caseinoglycopeptide derivatives
AB Various caseinoglycopeptide derivs. prepared from mammalian milk were evaluated as inhibitors of hemagglutinations mediated by Actinomyces viscosus Ny1, Streptococcus sanguis OMZ9, and, for comparative purposes, plant lectins from Arachis hypogaea and Bauhinia purpurea. It was found that recognition of the β-D-galactose-(1→3)-2-acetamido-2-deoxy-D-galactose carbohydrate chain by Actinomyces viscosus Ny1 organisms and Arachis hypogaea and B. purpurea agglutinins had similar structural requirements; in all cases, the desialylated bovine caseinoglycomacropeptide, on which several units of the above mentioned disaccharide are clustered, behaved as the most potent hemagglutination inhibitor. By contrast, none of the prepns. tested inhibited erythrocyte agglutination by S. sanguis OMZ9. Thus, the desialylated bovine caseinoglycomacropeptide acts as a potent and specific inhibitor of oral Actinomyces adhesion to cell membranes (a soft surface) and could be used as a probe for the study of recognition mechanisms mediated by Actinomyces galactose-binding lectins. Both native and desialylated variants of the same bovine glycomacropeptide also totally prevented the adhesion of Acinomyces viscousus Ny1, S. sanguis OMZ9, and S. mutants OMZ176 to polystyrene surfaces. Neither mono- nor disaccharides related to caseinoglycopeptide carbohydrates prevented adhesion; highly pos. or neg. charged polypeptides and polysaccharides were either not or only moderately active. Besides these glycomacropeptides, an inhibitory activity was also exhibited by other mucin-type glycoproteins carrying short O-linked carbohydrate chains (including bovine submaxillary mucin), polyethylene glycol, and bovine serum albumin. Consequently, caseinoglycopeptide prevention of oral bacterial adhesion to polystyrene tubes (a hard surface) takes place with no species specificity and can be compared to nonspecific inhibition exhibited by various polymers with very different structural characteristics.
AN 1989:72413 HCAPLUS <<LOGINID::20090130>>
DN 110:72413
OREF 110:11891a,11894a
TI Specific and nonspecific inhibition of adhesion of oral actinomyces and streptococci to erythrocytes and polystyrene by caseinoglycopeptide derivatives
AU Neeser, Jean Richard; Chambaz, Arlette; Del Vedovo, Simone; Prigent, Marie Jose; Guggenheim, Bernhard
CS Nestle Res. Cent., Nestec-Ltd., Vers-chez-les-Blanc, CH-1000, Switz.
SO Infection and Immunity (1988), 56(12), 3201-8
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English

L12 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Studies on human αs- and κ-casein fractions and human caseinoglycomacropeptide
AB Fractions have been obtained from human whole casein closely resembling the αs- and κ-fractions of cow casein. The αs-fraction (human αs-casein) is Ca-sensitive, heterogeneous in zone analysis, and inert towards rennin. The κ-fraction (human κ-casein) is Ca-insensitive, heterogeneous in zone analysis, and forms a soluble glycopeptide when acted upon by rennin. Human κ-casein stabilizes human αs-casein in the presence of Ca2+. The glycopeptides released

by rennin from human casein and from cow casein have been compared. There are important differences in both the peptide and nonpeptide structures of the 2 compounds. In both human and bovine glycopeptides some of the carbohydrate residues are joined to the peptide by O-glycosidic links with threonine, and possibly with serine.
AN 1966:509294 HCAPLUS <<LOGINID::20090130>>
DN 65:109294
OREF 65:20396g-h,20397a
TI Studies on human αs- and κ-casein fractions and human caseinoglycomacropeptide
AU Malpress, F. H.; Seid-Akhavan, M.
CS Queen's Univ., Belfast, N. Ire.
SO Biochemical Journal (1966), 101, 764-73
CODEN: BIJOAK; ISSN: 0264-6021
DT Journal
LA English

=> s chitooligosaccharide or (chito-oligosaccharide) or chitotriose or chitotetraose or chitopentose ot chitohexose
529 CHITOOLIGOSACCHARIDE
374 CHITO
32931 OLIGOSACCHARIDE
91 CHITO-OLIGOSACCHARIDE
(CHITO(W)OLIGOSACCHARIDE)
306 CHITOTRIOSE
196 CHITOTETRAOSE
14 CHITOPENTOSE
11584 OT
11 CHITOHEXOSE
0 CHITOPENTOSE OT CHITOHEXOSE
(CHITOPENTOSE(W)OT(W)CHITOHEXOSE)
L13 944 CHITOOLIGOSACCHARIDE OR (CHITO-OLIGOSACCHARIDE) OR CHITOTRIOSE OR CHITOTETRAOSE OR CHITOPENTOSE OT CHITOHEXOSE

=> s chitooligosaccharide or (chito-oligosaccharide) or chitotriose or chitotetraose or chitopentose or chitohexose
529 CHITOOLIGOSACCHARIDE
374 CHITO
32931 OLIGOSACCHARIDE
91 CHITO-OLIGOSACCHARIDE
(CHITO(W)OLIGOSACCHARIDE)
306 CHITOTRIOSE
196 CHITOTETRAOSE
14 CHITOPENTOSE
11 CHITOHEXOSE
L14 953 CHITOOLIGOSACCHARIDE OR (CHITO-OLIGOSACCHARIDE) OR CHITOTRIOSE OR CHITOTETRAOSE OR CHITOPENTOSE OR CHITOHEXOSE

=> s prebiotic
L15 4563 PREBIOTIC

=> s l14 and l15
L16 0 L14 AND L15

=> s gut or microflora or intestinal
32607 GUT
13802 MICROFLORA
133137 INTESTINAL
L17 166445 GUT OR MICROFLORA OR INTESTINAL

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=> s l14 and l17
L18         15 L14 AND L17

=> s l18 and (PY<2003 or AY<2003 or PRY<2003)
      22983114 PY<2003
       4503368 AY<2003
       3972163 PRY<2003
L19          7 L18 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> d l19 1-7 ti abs bib

L19  ANSWER 1 OF 7  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Effects of chitooligosaccharides on blood glucose and intestinal
     flora in diabetic mice
AB   The effects of chitooligosaccharides on the blood glucose content and the
     intestinal flora in STZ (streptozotocin)-diabetic mice were
     studied.  The STZ mice were divided into 2 groups: diabetic treatment
     group and a diabetic control group.  The former mice received (i.g.)
     chitooligosaccharides at a dose of 600 mg/kg daily for 21 days and the
     latter received the equal volume of distilled water.  The level of blood
     glucose and the nos. of intestinal flora were measured.  The
     blood glucose level in the diabetic treatment group was reduced by
     chitooligosaccharides and the number of bifidobacterium was significantly
     higher than that in STZ-diabetic mice without treatment.  Thus,
     chitooligosaccharides could decrease the blood glucose level in diabetic
     mice and modulate the function of intestinal flora in mice to
     the benefit of the host.
AN   2001:931742  HCAPLUS <<LOGINID::20090130>>
DN   137:134827
TI   Effects of chitooligosaccharides on blood glucose and intestinal
     flora in diabetic mice
AU   Ren, Lin; Li, Bangliang; Gao, Shiying; Chen, Chaoqun; Li, Mulan
CS   Department of Clinical Laboratory, No. 1 Affiliated Hospital, Nan hua
     University, Hengyang, 421001, Peop. Rep. China
SO   Zhongguo Shenghua Yaowu Zazhi (2001), 22(5), 227-229
     CODEN: ZSYZFP; ISSN: 1005-1678
PB   Zhongguo Shenghua Yaowu Zazhi Bianjibu
DT   Journal
LA   Chinese

L19  ANSWER 2 OF 7  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Lectin-mediated bioadhesion: preparation, stability and Caco-2 binding of
     wheat germ agglutinin-functionalized poly(D,L-lactic-co-glycolic
     acid)-microspheres
AB   To take advantage of the cytoadhesive characteristics of Wheat germ
     agglutinin (WGA) for improved particulate drug delivery, the interaction
     between WGA-grafted poly(DL-lactic-co-glycolic acid)-microspheres and
     Caco-2 monolayers was investigated using bovine serum albumin (BSA) or
     glycine coated microspheres as a control.  Covalent immobilization of WGA
     by the carbodiimide/N-hydroxysuccinimide-method on 4 μm microspheres
     yielded a surface d. of 9.67 ± 1.21 + 106 mols./particle, whereas
     0.22±0.04 + 106 WGA-mols. were bound by phys. adsorption.  After
     storage for 21 days in HEPES-buffer and treatment of the particles with 5
     M urea, 86% of covalently linked lectin was still attached to the
     particles.  At 4°C the Caco-2 binding rate of both, WGA- and
     BSA-modified particles increased with addition of increasing nos. of
     particles until saturation was reached at 38150±1740 (WGA) or 12066±1195
     (BSA) microspheres bound/mm2 Caco-2 monolayer.  Inhibition of Caco-2
     binding of WGA-functionalized microspheres by chitotriose
     indicated for specificity of the interaction.  As observed by confocal laser
     scanning microscopy, the fluorescein-loading of the particles was
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accumulated intracellularly after incubation of Caco-2 monolayers with WGA-modified microspheres contrary to glycine-grafted microspheres. Addnl., in case of WGA-functionalized microspheres the amount of cell associated fluorescein was 200-fold higher than that of the free solution In conclusion, WGA-modified microspheres are expected to enhance intestinal transport of incorporated drugs due to cytoadhesion provided by the lectin coating.

AN 2000:552428 HCAPLUS <<LOGINID::20090130>>

DN 133:286314

TI Lectin-mediated bioadhesion: preparation, stability and Caco-2 binding of wheat germ agglutinin-functionalized poly(D,L-lactic-co-glycolic acid)-microspheres

AU Ertl, Bernhard; Heigl, Franziska; Wirth, Michael; Gabor, Franz

CS Institute of Pharmaceutical Technology and Biopharmaceutics, The University of Vienna, Vienna, A-1090, Austria

SO Journal of Drug Targeting (2000), 8(3), 173-184
CODEN: JDTAEH; ISSN: 1061-186X

PB Harwood Academic Publishers

DT Journal

LA English

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Characterization and inhibitor studies of chitinases from a parasitic blowfly (Lucilia cuprina), a tick (Boophilus microplus), an intestinal nematode (Haemonchus contortus) and a bean (Phaseolus vulgaris)

AB The mol. weight pattern and the stage-specific activities of chitinases from L. cuprina, B. microplus and H. contortus, were examined Chitinolytic enzymes could be detected in all species, but the activity was different between the stages. Highest chitinolytic titers were found in blowfly pupae (83 kDa, 118 kDa), hatching larvae of ticks (58 kDa, 94 kDa) and nematode eggs (43 kDa). Leaves from ethylene-treated bean P. vulgaris expressed two basic Class I chitinases (Ia, Ib) of 34 kDa, differing in their amino acid sequences at residue 33 and 34 (Ia: glycine, proline; Ib: lysine, aspartic acid). Inhibitor studies with blowfly pupae revealed that allosamidin (IC50 = 0·32 (±0·02) μM) was by far the best inhibitor when compared with various amino sugar derivs. This compound also inhibited chitinases from tick larvae (IC50 = 0·69(±0·10) μM) and nematode eggs (IC50 = 0.048(±0·0045) μM) specifically. Whereas Class Ia chitinase from bean leaves was inhibited only up to 18% by 10 μM allosamidin, it had an IC50 of 1(±0·14) μM for the Ib type, which is the first plant chitinase described to be highly sensitive to allosamidin.

AN 1997:39041 HCAPLUS <<LOGINID::20090130>>

DN 126:72737

OREF 126:14025a,14028a

TI Characterization and inhibitor studies of chitinases from a parasitic blowfly (Lucilia cuprina), a tick (Boophilus microplus), an intestinal nematode (Haemonchus contortus) and a bean (Phaseolus vulgaris)

AU Londershausen, Michael; Turberg, Andreas; Bieseler, Barbara; Lennartz, Marco; Peter, Martin G.

CS Bayer AG, Leverkusen, D-51368, Germany

SO Pesticide Science (1996), 48(4), 305-314
CODEN: PSSCBG; ISSN: 0031-613X

PB Wiley

DT Journal

LA English

RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Characterization of a major peritrophic membrane protein, peritrophin-44, from the larvae of Lucilia cuprina: cDNA and reduced amino acid sequences
AB The peritrophic membrane is a semi-permeable chitinous matrix lining the gut of most insects and is thought to have important roles in the maintenance of insect gut structure, facilitation of digestion, and protection from invasion by microorganisms and parasites. Proteins are integral components of this matrix, although the structures and functions of these proteins have not been characterized in any detail. The peritrophic membrane from the larvae of the fly Lucilia cuprina, the primary agent of cutaneous myiasis in sheep, was shown to contain six major integral peritrophic membrane proteins. Two of these proteins, a 44-kDa glycoprotein (peritrophin-44) and a 48-kDa protein (peritrophin-48) together represent >70% of the total mass of the integral peritrophic membrane proteins. Peritrophin-44 was purified and its complete amino acid sequence was determined by cloning and sequencing the DNA complementary to its mRNA. The deduced amino acid sequence codes for a protein of 356 amino acids containing an amino-terminal signal sequence followed by five similar but nonidentical domains, each of approx. 70 amino acids and characterized by a specific register of 6 cysteines. One of these domains was also present in the noncatalytic regions of chitinases from Brugia malayi, Manduca sexta, and Chelonus. Peritrophin-44 has a uniform distribution throughout the larval peritrophic membrane. Reverse transcriptase-polymerase chain reaction detected the expression of peritrophin-44 in all three larval instars but only trace levels in adult L. cuprina. The protein binds specifically to tri-N-acetyl chitotriose and reacetylated chitosan in vitro. It is concluded that the multiple cysteine-rich domains in peritrophin-44 are responsible for binding to chitin, the major constituent of peritrophic membrane. Peritrophin-44 probably has roles in the maintenance of peritrophic membrane structure and in the determination of the porosity of the peritrophic membrane. This report represents the first characterization of an insect peritrophic membrane protein.
AN 1996:233454 HCAPLUS <<LOGINID::20090130>>
DN 124:284665
OREF 124:52631a,52634a
TI Characterization of a major peritrophic membrane protein, peritrophin-44, from the larvae of Lucilia cuprina: cDNA and reduced amino acid sequences
AU Elvin, Chris M.; Vuocolo, Tony; Pearson, Roger D.; East, Iain J.; Riding, George A.; Eisemann, Craig H.; Tellam, Ross L.
CS Div. Tropical Animal Production, CSIRO, Indooroopilly, 4068, Australia
SO Journal of Biological Chemistry (1996), 271(15), 8925-35
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English

L19 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Effects of carbohydrates and lectins on cryptosporidial sporozoite penetration of cultured cell monolayers
AB Cryptosporidium parvum first interacts with enterocytes when sporozoites penetrate the host plasma membrane. A shell vial assay using human embryonic Intestine 407 cells and purified C. parvum sporozoites was developed to study this process. Sporozoites were incubated in culture medium with various carbohydrates and lectins, and the suspensions were then added to the cell monolayers. Following incubation, the monolayers were fixed and stained and the number of schizonts were counted. No decreases in sporozoite motility or Intestine 407 cell viability were observed with carbohydrate or lectin treatment. N-Acetyl-D-glucosamine,

chitobiose, and chitotriose inhibited C. parvum infection, compared to 5 other tested carbohydrates. Wheat-germ agglutinin reduced penetration and Con A enhanced schizont formation, when compared to 8 other lectins. Next, sporozoites or Intestine 407 cells were pretreated with wheat germ agglutinin and Con A prior to sporozoite inoculation. Wheat-germ agglutinin treatment of sporozoites or cells equally caused a reduction in C. parvum infection, whereas enhancement was only observed when Intestine 407 cells were pretreated with Con A. These data suggest that glycoproteins with terminal N-acetyl-D-glucosamine residues may play a role in C. parvum adhesion or penetration of enterocytes. Also, host glycoproteins with Con A-like activity may play a role in these processes.
AN 1992:212099 HCAPLUS <<LOGINID::20090130>>
DN 116:212099
OREF 116:35883a,35886a
TI Effects of carbohydrates and lectins on cryptosporidial sporozoite penetration of cultured cell monolayers
AU Kuhls, Thomas L.; Mosier, Derek A.; Crawford, David L.
CS Health Sci. Cent., Univ. Oklahoma, Oklahoma City, OK, 73104, USA
SO Journal of Protozoology (1991), 38(6), 74S-76S
CODEN: JPROAR; ISSN: 0022-3921
DT Journal
LA English

L19 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Proteolysis in the gut of mosquito larvae results in further activation of the Bacillus sphaericus toxin
AB Gut proteases from the larvae of the mosquito Culex pipiens convert the 43-kilodalton (kDa) toxin from B. sphaericus 2362 to a 40-kDa peptide. The 50% lethal concentration of this peptide for tissue culture-grown cells of C. quinquefasciatus was 1.0 μg/mL (as determined by the intracellular ATP assay), 54-fold less than that of the 43-kDa peptide. Gut proteases from Anopheles gambiae and Aedes aegypti, as well as bovine pancreatic trypsin, also converted the 43-kDa protein to a 40-kDa peptide which was indistinguishable from the peptide formed by the proteases from C. pipiens with respect to its toxicity to tissues culture-grown cells of C. quinquefasciatus. Evidence for the in vivo conversion of the 43-kDa protein to the 40-kDa peptide was also obtained from expts. in which larvae of C. pipens, A. gambiae, and A. aegypti were fed crystals from B. sphaericus 2362. By using the exclusion of trypan blue as an indication of cell viability, it was shown that chitobiose, chitotriose, N-acetylmuramic acid, and N-acetylneuraminic acid decreased the toxicity of the 40 kDa peptide (from 100 to 50% mortality at .apprx.10 mM concns. of these sugars). Muramic acid, N-acetylgalactosamine, and N-acetylglucosamine were less effective, while several sugars had no effect, suggesting that the 40-kDa toxin binds to specific receptors on the cell membrane. The 40-kDa protein was less toxic to tissue culture-grown cells of A. gambiae and A. dorsalis, and the same sugars which reduced the toxicity for cells of C. quinquefasciatus were also effective in reduction of toxicity for these cell lines. Apparently the tissue culture-grown cells from the 3 species of mosquito have identical or similar receptors for the 40-kDa toxin.
AN 1987:434750 HCAPLUS <<LOGINID::20090130>>
DN 107:34750
OREF 107:5731a,5734a
TI Proteolysis in the gut of mosquito larvae results in further activation of the Bacillus sphaericus toxin
AU Broadwell, Andrew H.; Baumann, Paul
CS Dep. Bacteriol., Univ. California, Davis, CA, 95616, USA
SO Applied and Environmental Microbiology (1987), 53(6), 1333-7
CODEN: AEMIDF; ISSN: 0099-2240
DT Journal

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LA   English

L19  ANSWER 7 OF 7  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Chitinase from the gut of the cockroach, Periplaneta americana
AB   Chitinase was separated from the gut contents of the cockroach by
     (NH4)2SO4 precipitation and fractionated on diethylaminoethyl cellulose.  The
     enzyme (0.028 mg./ml.)digested 35% of the chitin in the reaction mixture in
     5 hrs.  Mixts. containing chitinase, oligosaccharides, and citrate buffer, pH
     4.5, were incubated for 5 hrs.  As the substrate was used, paper
     chromatography showed increasing tetraose, then pentaose, then hexaose.
     Hexaose broke down into biose, triose, and a small amount of tetraose.  No
     acetylaminodeoxyglucose was noted, and biose and triose were not attacked.
     An increase in enzyme concentration resulted in digestion of the triose to
     produce biose and acetylaminodeoxyglucose, but the biose remained
     unaffected.  Chitinase is incapable of splitting chitobiose, splits
     chitotriose slowly, and splits oligosaccharides rapidly.  The
     production of biose and triose from hexaose indicates random splitting and
     that chitinase is an endoenzyme.
AN   1964:32380  HCAPLUS <<LOGINID::20090130>>
DN   60:32380
OREF 60:5819d-f
TI   Chitinase from the gut of the cockroach, Periplaneta americana
AU   Powning, R. F.; Irzykiewicz, H.
CS   Div. Entomol., C.S.I.R.O., Canberra, Australia
SO   Nature (London, United Kingdom) (1963), 200(4911), 1128
     CODEN: NATUAS; ISSN: 0028-0836
DT   Journal
LA   Unavailable


=> s methyl(w)(mannooligosaccharide or (manno-oligosaccharide))
      1086355 METHYL
          227 MANNOOLIGOSACCHARIDE
         2762 MANNO
        32931 OLIGOSACCHARIDE
           41 MANNO-OLIGOSACCHARIDE
                (MANNO(W)OLIGOSACCHARIDE)
L20          1 METHYL(W)(MANNOOLIGOSACCHARIDE OR (MANNO-OLIGOSACCHARIDE))

=> d l20 ti abs bib

L20  ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Synthetic studies on cell-surface glycans.  Part 12.  Proton and carbon-13
     NMR spectral study of synthetic methyl D-mannooligosaccharides
AB   1H- and 13C-NMR spectra for 16 synthetic Me manno-oligosaccharides were
     recorded, and the signals for the anomeric protons and anomeric carbon
     atoms in branched manno-pentaosides and -hexaosides were assigned, based
     on the data for Me manno-biosides and -triosides.  These NMR data
     identified the branching pattern of high-mannose types of glycans of
     glycopeptides with those of unambiguously synthesized
     manno-oligosaccharides, and confirmed the structures proposed for such
     glycans.
AN   1982:123143  HCAPLUS <<LOGINID::20090130>>
DN   96:123143
OREF 96:20233a,20236a
TI   Synthetic studies on cell-surface glycans.  Part 12.  Proton and carbon-13
     NMR spectral study of synthetic methyl D-mannooligosaccharides
AU   Ogawa, Tomoya; Sasajima, Kikuo
CS   Inst. Phys. Chem. Res., Wako, 351, Japan
SO   Carbohydrate Research (1981), 97(2), 205-27
     CODEN: CRBRAT; ISSN: 0008-6215
```

DT Journal
LA English

=> s gentiooligosachcaride or gentiobiose or gentiotriose or gentiotetraose or gentiopentose or gentiohexose
0 GENTIOOLIGOSACHCARIDE
1409 GENTIOBIOSE
46 GENTIOTRIOSE
28 GENTIOTETRAOSE
0 GENTIOPENTOSE
0 GENTIOHEXOSE
L21 1418 GENTIOOLIGOSACHCARIDE OR GENTIOBIOSE OR GENTIOTRIOSE OR GENTIOTETRAOSE OR GENTIOPENTOSE OR GENTIOHEXOSE

=> s gentiooligosaccharide or gentiobiose or gentiotriose or gentiotetraose or gentiopentose or gentiohexose
27 GENTIOOLIGOSACCHARIDE
1409 GENTIOBIOSE
46 GENTIOTRIOSE
28 GENTIOTETRAOSE
0 GENTIOPENTOSE
0 GENTIOHEXOSE
L22 1434 GENTIOOLIGOSACCHARIDE OR GENTIOBIOSE OR GENTIOTRIOSE OR GENTIOTETRAOSE OR GENTIOPENTOSE OR GENTIOHEXOSE

=> s l17 and l22
L23 28 L17 AND L22

=> s l23 and (PY<2003 or AY<2003 or PRY<2003)
22983114 PY<2003
4503368 AY<2003
3972163 PRY<2003
L24 19 L23 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> d l24 1-19 ti abs bib

L24 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Microflora of microorganisms and several characteristics of laban, a traditional natural fermented milk in Yemen
AB Microflora of lactic acid bacteria and yeasts of Laban which had been made with bovine or ovine milk by traditional natural fermentation in Yemen, were studied. The mean of viable cell counts of microorganisms in Laban was 6.4 + 108 cfu/mL. The 60 strains of lactic acid bacteria and 24 strains of yeasts were isolated and identified. The percentages of strains on lactic acid bacteria flora were as follows: Lactococcus lactis subsp. lactis(1) was dominant in 88%. Lc lactis subsp. lactis(2), Leuconostoc mesenteroides subsp. mesenteroides, and Leuc. lactis were in 5, 5, and 2%, resp. It was recognized that the some characteristics of Lc. lactis subsp. lactis(1) of the dominant strain were different from those of Lc. lactis subsp. lactis(2). The percentages of strains on yeast flora were as follows: Trichosporon sericeum, Saccharomyces cerevisiae, and Candida kefyr were dominant in 34, 21, and 21%, resp. In addition S. pastorianus, C. versatilis, C. pseudotropicalis, and Zygosaccharomyces microellipsoides were in 8, 8, 4, and 4%, resp. It was recognized that the single culture of S. cerevisiae did not produce ethanol in 10% reconstituted skimmilk, but otherwise the mixed culture of the strains together with lactic acid bacteria produced it in 10% reconstituted skimmilk. The Laban were manufactured by using the several mixed cultures of 4 strains of lactic acid bacteria and 2 strains of yeasts isolated from Laban in Yemen. The each mixed cultures were inoculated in 10%

reconstituted skimmilk, and were incubated at 30°, for 1-5 days. It was found that the rheol. scores (G', G" and G*) of the curds increased and the flavor of those were more desirable in the Laban manufactured by the incubation at 30°, 4 days.

AN 2002:698367 HCAPLUS <<LOGINID::20090130>>
DN 138:203941
TI Microflora of microorganisms and several characteristics of laban, a traditional natural fermented milk in Yemen
AU Arai, Ikichi; Nakajima, Keisuke; Maruyama, Chigure; Nakamura, Tadashi; Toba, Takahiro; Urashima, Tadasu
CS Dep. Bioresour. Sci., Obihiro Univ. Agric. Veterinary Med., Obihiro, 080-8555, Japan
SO Miruku Saiensu (2002), 51(2), 63-72
CODEN: MISAFD; ISSN: 1343-0289
PB Nippon Rakuno Kagakkai
DT Journal
LA Japanese

L24 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Change in the cecum contents of rats by oligosaccharide
AB Effects of oligosaccharide syrups added to drinking water or a basal diet on decreasing or suppressing generation of fecal odor of domestic animals were studied using rats. Syrups of isomaltooligosaccharide, gentiooligosaccharide, and nigerooligosaccharide (NGO) added to drinking water significantly increased water intake and also, addition of NGO significantly increased serum cholesterol levels of rats. Addition of 10% NGO syrup to the basal diet significantly increased feces weight and feces N and decreased digestibility of diet N compared with addition of 5% NGO syrup and control (no addition of oligosaccharide syrups). Propionic acid and butyric acid concns. in the cecum contents were significantly lower in rats given 5% NGO syrup with the basal diet than those given 10% NGO syrup and control. Valeric acid concentration in the cecum contents was significantly decreased when 5 or 10% NGO syrup was given with the basal diet. NGO may influence fermentation in the cecum and alter fecal volatile fatty acid composition
AN 2002:401831 HCAPLUS <<LOGINID::20090130>>
DN 137:139824
TI Change in the cecum contents of rats by oligosaccharide
AU Iwata, Hidetoshi; Ando, Ryuichi; Ohgushi, Atsushi; Yamashita, Tomoe; Tobisa, Manabu; Yamamoto, Mikio; Furuse, Mitsuhiro
CS Department of Animal and Marine Bioresource Science, Faculty of Agriculture, Graduate School, Kyushu University, Japan
SO Chikusan no Kenkyu (2002), 56(4), 494-500
CODEN: CKNKAJ; ISSN: 0009-3874
PB Yokendo
DT Journal
LA Japanese

L24 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Production of short-chain fatty acids and gas from various oligosaccharides by gut microbes of carp (Cyprinus carpio L.) in micro-scale batch culture
AB We studied the metabolism of various oligosaccharides by carp (Cyprinus carpio) hindgut microbes by measuring gas productivity and organic acid production in gut contents using a 50-μl-scale batch culture system. Carp hindgut contents were incubated with 500 μg each of raffinose, lactosucrose, kestose, lactulose, gentiobiose, 4'-galactosyllactose and 6'-galactosyllactose and soybean-, xylo-, and isomalto-oligosaccharides or none (blank culture) at 25 °C for 6 h. The time-course of gas release from the culture (Y μl/culture) was

expressed as an exponential function of incubation time (t) [Y=A+B+(1-e-kt)]; A, B and k are consts. Potential production of gas (A+B) from soybean-oligosaccharide and raffinose was larger than for the other saccharides except for kestose, and blank culture. The rate constant of gas (k) for lactosucrose was larger than that for isomalto- and xylo-oligosaccharide, lactulose, kestose or blank culture. Net production of total SCFA (sum of acetic, propionic and n-butyric acid wts.) from cultures with soybean- and isomalto-oligosaccharides, raffinose, gentiobiose and lactosucrose was greater than that from blank culture. These results suggested that soybean-oligosaccharide and raffinose were potentially highly fermentable oligosaccharides for carp hindgut microbes. Chemical structures of oligosaccharides seem to play an important role in the fermentability. It is also likely that oligosaccharide utilization differs between mammals and teleosts.

AN 2002:383673 HCAPLUS <<LOGINID::20090130>>
DN 137:165975
TI Production of short-chain fatty acids and gas from various oligosaccharides by gut microbes of carp (Cyprinus carpio L.) in micro-scale batch culture
AU Kihara, Minoru; Sakata, Takashi
CS Central Research Institute, Maruha Corporation, Tsukuba, 300-4295, Japan
SO Comparative Biochemistry and Physiology, Part A: Molecular & Integrative Physiology (2002), 132A(2), 333-340
CODEN: CBPAB5; ISSN: 1095-6433
PB Elsevier Science Inc.
DT Journal
LA English
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Constitutive β-glucosidases hydrolyzing ginsenoside Rb1 and Rb2 from human intestinal bacteria
AB When ginsenoside Rb1 and Rb2 were anaerobically incubated with human intestinal microflora, these ginsenosides were metabolized to 20-O-β-D-glucopyranosyl-20(S)-protopanaxadiol (compound K) and 20(S)-protopanaxadiol. Several kinds of intestinal bacteria hydrolyzed these ginsenosides. Eubacterium sp., Streptococcus sp. and Bifidobacterium sp., which more potently hydrolyzed gentiobiose than sophorose, metabolized ginsenoside Rb1 to compound K via ginsenoside Rd rather than gypenoside XVII. However, Fusobacterium K-60, which more potently hydrolyzed sophorose than gentiobiose, metabolized to compound K via gypenoside XVII. Ginsenoside Rb2 was also metabolized to compound K via ginsenoside Rd or compound O by human intestinal microflora. Eubacterium sp., Streptococcus sp. and Bifidobacterium sp. metabolized ginsenoside Rb2 to compound K via ginsenoside Rd rather than compound O. Fusobacterium K-60 metabolized ginsenoside Rb2 to compound K via compound O.
AN 2000:863206 HCAPLUS <<LOGINID::20090130>>
DN 134:172661
TI Constitutive β-glucosidases hydrolyzing ginsenoside Rb1 and Rb2 from human intestinal bacteria
AU Bae, Eun-Ah; Park, Sun-Young; Kim, Dong-Hyun
CS College of Pharmacy, Kyung Hee University, Seoul, 130-701, S. Korea
SO Biological & Pharmaceutical Bulletin (2000), 23(12), 1481-1485
CODEN: BPBLEO; ISSN: 0918-6158
PB Pharmaceutical Society of Japan
DT Journal
LA English
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Effects of gentiooligosaccharides on human intestinal flora and food processing
AB A review with 8 refs.
AN 1998:521107 HCAPLUS <<LOGINID::20090130>>
DN 129:244243
OREF 129:49727a,49730a
TI Effects of gentiooligosaccharides on human intestinal flora and food processing
AU Unno, Takehiro
CS Laboratory, Nippon Food Processing Co., Ltd., Japan
SO Food Style 21 (1998), 2(8), 70-73
CODEN: FSTYFF
PB Shokuhin Kagaku Shinbunsha
DT Journal; General Review
LA Japanese

L24 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Structural analysis of disaccharides synthesized by β-D-glucosidase of Bifidobacterium breve clb and their assimilation by Bifidobacteria
AB Circulation of a solution of 1 M D-fucose and 1 M D-glucose through a reaction system consisting of serial columns of immobilized recombinant β-D-glucosidase of Bifidobacterium breve clb and activated charcoal gave two oligosaccharides. Structural anal. identified these oligosaccharides as D-fucosylglucose and gentiobiose. The D-fucosylglucose obtained was well assimilated by many Bifidobacteria but not by the other intestinal bacteria tested.
AN 1997:424122 HCAPLUS <<LOGINID::20090130>>
DN 127:146906
OREF 127:28305a,28308a
TI Structural analysis of disaccharides synthesized by β-D-glucosidase of Bifidobacterium breve clb and their assimilation by Bifidobacteria
AU Nunoura, Naoki; Fujita, Tomoyuki; Ohdan, Kohji; Kirihata, Mitsunori; Yamamoto, Kenji; Kumagai, Hidehiko
CS Department of Food Science and Technology, Faculty of Agriculture, Kyoto University, Kitashirakawa, 606-01, Japan
SO Bioscience, Biotechnology, and Biochemistry (1997), 61(6), 1033-1035
CODEN: BBBIEJ; ISSN: 0916-8451
PB Japan Society for Bioscience, Biotechnology, and Agrochemistry
DT Journal
LA English
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Improvement of intestinal absorption of leucine enkephalin by sugar coupling and peptidase inhibitors
AB Peptidase-degradable leucine enkephalin (LE) was coupled with cellobiose or gentiobiose. In the absorption expts., cellobiose-coupled LE (CcpLE) was more stable than LE itself on the mucosal side, and CcpLE appeared on the serosal side. Destyrosyl LE coupled with cellobiose was not formed, indicating that sugar coupling provided LE with aminopeptidase resistance. In the presence of angiotensin-converting enzyme and enkephalinase inhibitors, the stability of CcpLE on the mucosal side was increased, and as a result more was absorbed. Furthermore, the absorption clearance was much higher than the value expected from the mucosal concentration of CcpLE. Similar results were observed in the absorption of gentiobiose-coupled LE. In the LE absorption experiment, however, LE

was not detected on the serosal side even in the presence of these peptidase inhibitors. Improvement of intestinal absorption by sugar coupling and peptidase inhibitors was evaluated kinetically, indicating the exclusive contribution of metabolic degradation of LE through intestinal tissues to the absorption process.
AN 1996:417940 HCAPLUS <<LOGINID::20090130>>
DN 125:123422
OREF 125:22969a,22972a
TI Improvement of intestinal absorption of leucine enkephalin by sugar coupling and peptidase inhibitors
AU Mizuma, Takashi; Ohta, Kunihiro; Koyanagi, Akihiro; Awazux, Shoji
CS School of Pharmacy, Tokyo University of Pharmacy and Life Science, Tokyo, 192-03, Japan
SO Journal of Pharmaceutical Sciences (1996), 85(8), 854-857
CODEN: JPMSAE; ISSN: 0022-3549
PB American Chemical Society
DT Journal
LA English

L24 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Evolution of digestion of carbohydrates in the separate parts of the digestive tract of the edible snail Helix lucorum (Gastropoda: Pulmonata: Stylommatophora) during a complete 24-hour cycle and the first days of starvation
AB In the present study we examined carbohydrase activities during a complete 24-h cycle and during the first days of starvation in both adult and juvenile snails. The results indicated the predominant role of the digestive gland in the secretions of the enzymes responsible for degradation of most of the carbohydrates tested. Salivary glands secreted some digestive enzymes but in amts. lower than secreted by the digestive gland. Enzymic activities fluctuated during the first hours of digestion and also after the digestive tract was empty. The relatively high enzymic activities recorded 24 h after the intake of food and during starvation could be due to the circadian rhythm of this species and/or to the participation of an existing microflora in the digestive tract of Helix lucorum. The double origin (exogenous and endogenous) of some digestive enzymes such as cellulases is discussed.
AN 1996:191242 HCAPLUS <<LOGINID::20090130>>
DN 124:284778
OREF 124:52655a,52658a
TI Evolution of digestion of carbohydrates in the separate parts of the digestive tract of the edible snail Helix lucorum (Gastropoda: Pulmonata: Stylommatophora) during a complete 24-hour cycle and the first days of starvation
AU Flari, V.; Lazaridou-Dimitriadou, M.
CS Faculty of Sciences, Aristotle University of Thessaloniki, Thessaloniki, Greece
SO Journal of Comparative Physiology, B: Biochemical, Systemic, and Environmental Physiology (1996), 165(7), 580-91
CODEN: JPBPDL; ISSN: 0174-1578
PB Springer
DT Journal
LA English

L24 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Development of gentiooligosaccharide-containing syrups and their properties
AB The industrial production of gentiooligosaccharide-containing syrups (Gentose® #45&#80) was developed by using the condensation and transglucosylation reactions of fungal β-glucosidase. These syrups tasted bitter due to the gentiooligosaccharide. This is especially

true of Gentose®#45 since it has both the bitter taste and the sweet taste of glucose. These syrups showed high hygroscopicity, high moisture-retaining activity and reduced the f.p. of water more than sucrose. Other properties of gentiooligosaccharide-containing syrups such as osmotic pressure and water activity are almost the same as sucrose. Moreover, gentiooligosaccharide-containing syrups were not digested by pancreas originating α-amylase, and the maximum no-effect level values of both syrups were estimated to be more than 0.3 g/kg. The administration of β-glucooligosaccharides including gentiooligosaccharides (4 g daily for 10 days) promoted the growth of Bifidobacteria and lowered fecal pH, in vivo. From these results, it was presumed that gentiooligosaccharide-containing syrups might be utilized as brand-new oligosaccharides for the improvement of intestinal micro-flora and widely used for food processing and other applications.

AN 1996:97749 HCAPLUS <<LOGINID::20090130>>
DN 124:173946
OREF 124:32259a,32262a
TI Development of gentiooligosaccharide-containing syrups and their properties
AU Nakakuki, Teruo; Unno, Takehiro
CS Res. Inst., Nihon Shokuhin Kako Co., Ltd., Sizuoka, 417, Japan
SO Foods & Food Ingredients Journal of Japan (1996), 167, 116-21
CODEN: FFIJER; ISSN: 0919-9772
PB FFI Janaru
DT Journal
LA Japanese

L24 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Industrial production of gentiooligosaccharide-containing syrups
AB A review with 8 refs. The industrial production of syrups containing oligosaccharides of gentiobiose series was developed by using condensation and trans-glucosylation activities of β-glucosidase (EC 3.2.1.21). The administration of these saccharides (4 g daily for 10 days) promoted the growth of bifidobacteria and lowered fecal pH in vivo. These syrups might be widely utilized for food processing and for the improvement of intestinal microflora.

AN 1995:549201 HCAPLUS <<LOGINID::20090130>>
DN 122:312979
OREF 122:56921a,56924a
TI Industrial production of gentiooligosaccharide-containing syrups
AU Unno, Takehiro
CS Res. Inst., Nihon Shokuhin Kako Co., Ltd., Fuji, 417, Japan
SO Oyo Toshitsu Kagaku (1995), 42(1), 83-9
CODEN: OTKAE3; ISSN: 1340-3494
PB Nippon Oyo Toshitsu Kagakkai
DT Journal; General Review
LA Japanese

L24 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Identification and clustering of lactic acid bacteria and yeasts from wheat sourdoughs of central Italy
AB The microflora composition of 24 wheat sourdoughs from the Region of Umbria (Italy) was characterized. The number of lactic acid bacteria and yeast ranged from 5 + 107 to 5 + 109 and from 3 + 104 to 5 + 107 cfu/g, resp. About 20% of the 493 and 384 isolated strains of presumptive Lactobacillus and yeast species was identified using conventional physiol. and biochem. characteristics. As a whole, 49% of the Lactobacillus strains was identified as L. brevis subsp. lindneri, 21% as L. plantarum, 14% as L. farciminis, 4% both as L. acidophilus and L. fermentum, 3% both as L. fructivorans and L. alimentarius, and 2% as L.

brevis. Of yeasts, 66% were identified as Saccharomyces cerevisiae, 17% as Candida krusei, 16% as S. exiguus, and 1% as Hansenula anomala. The relationships within all the identified strains were established and are discussed using the results from the cluster anal. Sourdough data were plotted on the basis of the characterized lactic acid bacteria and yeast species.
AN 1994:654301 HCAPLUS <<LOGINID::20090130>>
DN 121:254301
OREF 121:46427a,46430a
TI Identification and clustering of lactic acid bacteria and yeasts from wheat sourdoughs of central Italy
AU Gobbetti, M.; Corsetti, A.; Rossi, J.; La Rosa, F.; De Vincenzi, S.
CS Istituto di Microbiologia Lattiero-Casearia, Facolta di Agraria, Perugia, 06100, Italy
SO Italian Journal of Food Science (1994), 6(1), 85-94
CODEN: ITFSEY; ISSN: 1120-1770
DT Journal
LA English

L24 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Na+-dependent transport of aminopeptidase-resistant sugar-coupled tripeptides in rat intestine
AB Aminopeptidase-degradable tripeptide, tyrosylglycylglycine (TGG, a part of aminopeptidase-degradable enkephalines), was coupled with sugars (cellobiose, maltose, lactose, gentiobiose and glucose). These sugar-coupled TGGs were stable enough to be transported from the mucosal to the serosal side in rat everted small intestine, while TGG was not stable enough to be transported. The transport of sugar-coupled TGGs was decreased in the absence of Na+, indicating the Na+-dependent transport of sugar-coupled TGG in rat intestine. Cellobiose-coupled TGG and glucose-coupled TGG did not mutually inhibit their transport. It was suggested that the intestinal Na+-dependent transporter for disaccharide-coupled tripeptides, which have a pyranose ring, was different from that of monosaccharide-coupled tripeptide, which has no pyranose ring.
AN 1994:652130 HCAPLUS <<LOGINID::20090130>>
DN 121:252130
OREF 121:45963a,45966a
TI Na+-dependent transport of aminopeptidase-resistant sugar-coupled tripeptides in rat intestine
AU Mizuma, Takashi; Sakai, Norio; Awazu, Shoji
CS Department Biopharmaceutics, Tokyo College Pharmacy, Hachioji, 192-03, Japan
SO Biochemical and Biophysical Research Communications (1994), 203(3), 1412-16
CODEN: BBRCA9; ISSN: 0006-291X
DT Journal
LA English

L24 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Removal of bitterness from β-glucooligosaccharides
AB Bitterness of β-glucooligosaccharides, useful as sweeteners and improvers for intestinal Bifidobacterium growth, are removed by reduction of the oligosaccharides. Gentiooligosaccharide syrup (containing gentiobiose 73.7, gentiotriose 20.2, and gentiotetraose 4.3%) (manufactured from glucose with β-glucosidase) was hydrogenated at 130° and 120 kg/cm2 H over Raney Ni for 4 h (hydrogenation ratio 99.4%). The product had less bitterness than control.
AN 1992:611288 HCAPLUS <<LOGINID::20090130>>
DN 117:211288

OREF 117:36473a,36476a
TI Removal of bitterness from β-glucooligosaccharides
IN Okada, Gentaro; Totsuka, Atsushi; Nakakuki, Teruo; Unno, Takehiro
PA Nippon Shokuhin Kako K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04148661	A	19920521	JP 1990-271352	19901009 <--
	JP 3020583	B2	20000315		
PRAI	JP 1990-271352		19901009	<--	

L24 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Exolytic hydrolysis of toxic plant glucosides by guinea pig liver cytosolic β-glucosidase
AB Although the guinea pig liver cytosolic β-glucosidase does not catalyze the hydrolysis of gentiobiose, it does hydrolyze disaccharide-containing glycosides such as p-nitrophenyl-β-D-gentiobioside (Glcβ1→6Glcβ-pNP) and mandelonitrile-β-D-gentiobioside (amygdalin). Furthermore, the enzyme attacks disaccharide glycosides exolytically; specifically, the authors document the exolytic deglucosylation of amygdalin and the generation of the intermediate monosaccharide glycoside mandelonitrile-β-D-glucoside prior to the formation of the aglycon (mandelonitrile). The cytosolic β-glucosidase catalyzes the hydrolysis of various phenolic (e.g. arbutin and salicin) and cyanogenic plant glucosides (e.g. prunasin). Using the everted gut-sack technique, the plant glucosides, amygdalin, prunasin, and vicine, are transported across the small intestine of the guinea pig efficiently and without being hydrolyzed. Thus, the cytosolic β-glucosidase may participate in biotransformation of toxic plant glucosides.
AN 1992:526101 HCAPLUS <<LOGINID::20090130>>
DN 117:126101
OREF 117:21765a,21768a
TI Exolytic hydrolysis of toxic plant glucosides by guinea pig liver cytosolic β-glucosidase
AU Gopalan, Venkatakrishnan; Pastuszyn, Andrzej; Galey, William R., Jr.; Glew, Robert H.
CS Sch. Med., Univ. New Mexico, Albuquerque, NM, 87131, USA
SO Journal of Biological Chemistry (1992), 267(20), 14027-32
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English

L24 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Derivatives of plant beta-glucans are hydrolyzed by intestinal lactase-phlorizin hydrolase of mammals
AB Laminaribiose and gentiobiose, 2 O-β-linked disaccharides deriving from plant β-glucans, were hydrolyzed in the rat small intestine by an enzyme anchored into the brush border membrane of the enterocytes. Immunol. and biochem. data, together with the developmental pattern of expression, support that this activity is carried out by the bifunctional enzyme involved in the hydrolysis of lactose and glycosylceramides: the lactase-phlorizin hydrolase complex.
AN 1992:38486 HCAPLUS <<LOGINID::20090130>>
DN 116:38486
OREF 116:6525a,6528a
TI Derivatives of plant beta-glucans are hydrolyzed by intestinal

lactase-phlorizin hydrolase of mammals
AU Freund, Jean Noel; Gosse, Francine; Raul, Francis
CS INSERM, Strasbourg, F-67200, Fr.
SO Enzyme (1991), 45(1-2), 71-4
CODEN: ENZYBT; ISSN: 0013-9432
DT Journal
LA English

L24 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Beta-glucooligosaccharide-containing composition as flavoring agent
AB Compns. containing β-gluco-oligosaccharides and/or reduced products thereof can be used as low-calorie flavoring agents in food, beverages, or medicines. These oligosaccharides promote the growth of beneficial intestinal flora (e.g. Bifidobacteria, lactic acid bacteria) but not pathogenic or putrefactive bacteria. Gentio-oligosaccharides were prepared by incubation of glucose with β-D-glucosidase. The mixture was used as is to prepare candies, cookies, drinks, etc. or fractionated by ion-exchange chromatog. for testing with various microorganisms.
AN 1991:581869 HCAPLUS <<LOGINID::20090130>>
DN 115:181869
OREF 115:31037a,31040a
TI Beta-glucooligosaccharide-containing composition as flavoring agent
IN Nakakuki, Teruo; Kainuma, Seishiro; Unno, Takehiro; Okada, Gentaro
PA Japan Maize Products Co., Ltd., Japan
SO Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	EP 415720	A2	19910306	EP 1990-309410	19900829	<--
	EP 415720	A3	19920108			
	EP 415720	B1	19960612			
	R: DE, FR, GB, IT, NL					
	JP 03083557	A	19910409	JP 1989-221927	19890829	<--
	JP 3100139	B2	20001016			
	JP 03262460	A	19911122	JP 1990-61935	19900313	<--
	US 5219842	A	19930615	US 1990-565441	19900809	<--
PRAI	JP 1989-221927	A	19890829	<--		
	JP 1990-61935	A	19900313	<--		

L24 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Sugar specificities of anti-human ABO(H) blood group erythrocyte agglutinins (lectins) and hemolytic activity in the hemolymph and gut extracts of three Glossina species
AB Relatively heat-labile, human ABO(H) blood group non-specific lectins or lectin-like agglutinins, titer range 2-9-2-16, were detected in Glossina morsitans morsitans, G. palpalis gambiensis and G. tachinoides hemolymph. The hemagglutinins exhibited wide specificities for carbohydrate residues on the surface of human erythrocytes, indicative of heterogeneity, which varied according to the tsetse species examined and the type of erythrocyte used. Hemolymph agglutinin reactivities were directed mainly towards sorbose, trehalose, glucose, 2-deoxygalactose and to a lesser extent the deoxy, [1-4]-and/or [1-6]-linked derivs. of glucose. Occasionally fructose, mannose, sucrose, turanose, stachyose and melezitose minimally inhibited agglutination. Midgut hemagglutinins, titers 2-6 or 2-7, were only found in G. m. morsitans exclusively against AB erythrocytes while hindgut exts. in all 3 Glossina species caused agglutination (titers 2-1-2-7) of most erythrocyte types. Heat-labile (possibly protease but not trypsin) hemolytic mols. were present in most gut prepns.

Conversely, a non-proteolytic, partially thermostable hemolysin(s) was detected in G. m. morsitans midgut samples. Gut hemagglutinin specificities were less diverse than those of hemolymph and effective agglutination inhibitors were glucose, galactose or mannose and their deoxy, aminated and N-acetylated derivs. Addnl. sorbose, sucrose, turanose, gluconic acid and Me glucoside inhibited in G. m. morsitans.
AN 1988:471775 HCAPLUS <<LOGINID::20090130>>
DN 109:71775
OREF 109:12016h,12017a
TI Sugar specificities of anti-human ABO(H) blood group erythrocyte agglutinins (lectins) and hemolytic activity in the hemolymph and gut extracts of three Glossina species
AU Ingram, George A.; Molyneux, David H.
CS Dep. Biol. Sci., Univ. Salford, Salford, M5 4WT, UK
SO Insect Biochemistry (1988), 18(3), 269-79
CODEN: ISBCAN; ISSN: 0020-1790
DT Journal
LA English

L24 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI α-Galactosidase activity of fungi on intestinal gas-forming peanut oligosaccharides
AB Neurospora sitophila and Rhizopus oligosporus, the 2 fungi which are used in the preparation of fermented peanut press cake (ontjom), and 8 other fungi, most of which are traditionally or industrially used to ferment oilseeds and grains, were examined for their ability to utilize sucrose, raffinose, and stachyose in peanuts. Trimethylsilyl ether derivs. of sugars extracted from unfermented peanut meal, as well as meal fermented for up to 98 hr, were quantitated by gas chromatog. with gentiobiose as an internal standard Six fungal strains, including N. sitophila, showed definite α-galactosidase activity with a decrease in raffinose and stachyose content of ferments. R. oligosporus and 3 other strains did not utilize these sugars or utilized them slowly.
AN 1974:550687 HCAPLUS <<LOGINID::20090130>>
DN 81:150687
OREF 81:23499a,23502a
TI α-Galactosidase activity of fungi on intestinal gas-forming peanut oligosaccharides
AU Worthington, R. E.; Beuchat, Larry R.
CS Dep. Food Sci., Univ. Georgia, Experiment, GA, USA
SO Journal of Agricultural and Food Chemistry (1974), 22(6), 1063-6
CODEN: JAFCAU; ISSN: 0021-8561
DT Journal
LA English

L24 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Gentiobiase
AB In addition to the enzymes lichenase and cellobiase, the dialyzed intestinal juice of the snail contains gentiobiase, as evidenced by the hydrolysis of gentiobiose in its presence.
AN 1925:10507 HCAPLUS <<LOGINID::20090130>>
DN 19:10507
OREF 19:1430h-i
TI Gentiobiase
AU Karrer, P.; Staub, M.
SO Biochemische Zeitschrift (1924), 152, 207-10
CODEN: BIZEA2; ISSN: 0366-0753
DT Journal
LA Unavailable

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L1         32931 S OLIGOSACCHARIDE
L2        114856 S MANNO OR MANNOSE OR ISOMALTO OR ISOMALTOSE OR GENTIO OR GENTI
L3          6385 S L1 AND L2
L4         76010 S CASEINOGLYCOMACROPEPTIDE OR GUAR OR GALACTOMANNAN OR LACTOSE
L5         81984 S L3 OR L4
L6        172759 S PREBIOTIC OR ENTERIC OR GUT OR INTESTINAL
L7          3858 S L5 AND L6
L8          2624 S L7 AND (PY<2003 OR AY<2003 OR PRY<2003)
L9            40 S L8 AND PREBIOTIC
L10          257 S CASEINOGLYCOMACROPEPTIDE OR GLYCOMACROPEPTIDE
L11           16 S CASEINOGLYCOMACROPEPTIDE
L12           14 S L11 AND (PY<2003 OR AY<2003 OR PRY<2003)
L13          944 S CHITOOLIGOSACCHARIDE OR (CHITO-OLIGOSACCHARIDE) OR CHITOTRIOS
L14          953 S CHITOOLIGOSACCHARIDE OR (CHITO-OLIGOSACCHARIDE) OR CHITOTRIOS
L15         4563 S PREBIOTIC
L16            0 S L14 AND L15
L17       166445 S GUT OR MICROFLORA OR INTESTINAL
L18           15 S L14 AND L17
L19            7 S L18 AND (PY<2003 OR AY<2003 OR PRY<2003)
L20            1 S METHYL(W)(MANNOOLIGOSACCHARIDE OR (MANNO-OLIGOSACCHARIDE))
L21         1418 S GENTIOOLIGOSACHCARIDE OR GENTIOBIOSE OR GENTIOTRIOSE OR GENTI
L22         1434 S GENTIOOLIGOSACCHARIDE OR GENTIOBIOSE OR GENTIOTRIOSE OR GENTI
L23           28 S L17 AND L22
L24           19 S L23 AND (PY<2003 OR AY<2003 OR PRY<2003)

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FULL ESTIMATED COST                                    278.30     278.52

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
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CA SUBSCRIBER PRICE                                    -65.60     -65.60

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CA SUBSCRIBER PRICE                                 -65.60     -65.60

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=> s methyl manno?
       1086355 METHYL
         59926 MANNO?
L25        206 METHYL MANNO?
                 (METHYL(W)MANNO?)

=> s l17 and l25
L26          2 L17 AND L25

=> d 126 1-2 ti abs bib

L26  ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Identification of a 148-kDa surface lectin from Giardia lamblia with
     specificity for α-methyl-D-mannoside
AB   A lectin specific for α-methyl-D-mannoside was purified from the
     membrane extract of Giardia lamblia by a combination of gel filtration
     chromatog. on Sephadex G-75 and Superose 6-HR 10/30.  The homogeneity of
     the lectin was established by SDS-PAGE.  The mol. mass of the native
     protein was 148 kDa.  The lectin agglutinated rabbit erythrocytes in the
     presence of Ca2+ at 37° and pH 7.0.  The maximum activity of the
     lectin was obtained after trypsin treatment.  The inhibition study clearly
     suggests that the binding site of the lectin recognizes
     α-methyl-D-mannoside as the immunodominant sugar.
AN   1995:961920  HCAPLUS <<LOGINID::20090130>>
DN   124:7014
OREF 124:1519a,1522a
TI   Identification of a 148-kDa surface lectin from Giardia lamblia with
     specificity for α-methyl-D-mannoside
AU   Sreenivas, K.; Ganguly, Nirmal K.; Ghosh, Sujata; Sehgal, Rakesh; Mahajan,
     Ramesh C.
CS   Department of Experimental Medicine, Postgraduate Institute of Medical
     Education and Research, Chandigarh, 160 012, India
SO   FEMS Microbiology Letters (1995), 134(1), 33-7
     CODEN: FMLED7; ISSN: 0378-1097
PB   Elsevier
DT   Journal
LA   English

L26  ANSWER 2 OF 2  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Fimbriae and adhesive properties in dysentery bacilli
AB   Electron microscopy revealed the presence of nonflagellar filamentous
     appendages, fimbriae, in 103 out of 145 strains of Shigella flexneri, the
     percentage being equal in freshly isolated and in older strains.  All
     fimbriate Flexner strains underwent reversible mutation between a
     fimbriate and a non-fimbriate phase.  The fimbriate mutant became dominant
     after cultivations in broth.  Its emergence was accompanied by a surface
     pellicle formation and a greater increase in growth, due apparently to the
     free O supply of the bacteria composing the pellicle.  The non-fimbriate
     mutant became dominant after serial cultivation aerobically on agar,
     anaerobically in broth, or aerobically in continually agitated broth.
     Fimbriation was invariably accompanied by possession of hemagglutinating
     activity, and its absence by lack of such activity.  Hemagglutination was
     not inhibited by the presence of mucin or normal serum, by warming to
     55°, or by any pH value between 3 and 10.  It was wholly inhibited
     by small concns. of D-mannose, α- methyl mannoside
     , and by yeast mannan.  Fimbriate bacteria adhered to the epithelial cells
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of guinea pig and human colon. Non-fimbriate bacteria did not so adhere, but were often agglutinated by the intestinal mucin. Fimbriation did not reduce susceptibility to attack by lytic phages. 22 references.

AN 1958:11786 HCAPLUS <<LOGINID::20090130>>
DN 52:11786
OREF 52:2162h-i,2163a-b
TI Fimbriae and adhesive properties in dysentery bacilli
AU Duguid, J. P.; Gillies, R. R.
CS Univ. Edinburgh, UK
SO Journal of Pathology and Bacteriology (1957), 74, 397-411
CODEN: JPBAA7; ISSN: 0368-3494
DT Journal
LA Unavailable

=> s methyl(W)(mannobiose or mannotriose or mannotetraose or mannopentose or mannohexose or mannooligosacchairde)
1086355 METHYL
383 MANNOBIOSE
289 MANNOTRIOSE
155 MANNOTETRAOSE
3 MANNOPENTOSE
0 MANNOHEXOSE
0 MANNOOLIGOSACCHAIRDE
L27 0 METHYL(W)(MANNOBIOSE OR MANNOTRIOSE OR MANNOTETRAOSE OR MANNOPENTOSE OR MANNOHEXOSE OR MANNOOLIGOSACCHAIRDE)